S. HRG. 98-1003

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

HEARINGS

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

SECOND SESSION

APRIL 11, 25; MAY 16, 23, 24; JUNE 25; AND JULY 31, 1984
JUNE 4, 1984—TRENTON, NJ

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AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

WEDNESDAY, APRIL 11, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, D.C.

The committee met, pursuant to notice, at 9:42 a.m., in room SD–406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Randolph, Mitchell, Lautenberg, and Burdick.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Good morning. We are scheduled to hear from 11 witnesses, so I will be brief and to the point.

This is the first of the committee's hearings on the proposed extension of the Superfund law. I expect several more in the next few weeks.

Despite the relatively small amount of legislative time remaining, it is my hope and intent to see a Superfund extension signed into law this year. I also hope and intend that the extension include amendments to the current law, one of which should provide redress for those injured by releases of toxic chemicals.

Every public opinion poll taken in the last few years reaffirms the public's desire for protection of the environment. At the top of each and every one of these polls, there is one fear which stands out from all the rest: Fear of toxic chemicals.

The public believes—and I agree—that the people of this country have a right to water that is safe to drink and air that is safe to breathe.

Chemicals have contributed mightily to the wealth and comfort of this country. But those who are the victims of a chemical society should not be the ones who shoulder the costs.

The price of leukemia, infant deaths, birth defects, and the many other chemically induced diseases should rest with those who manufacture, transport, buy and sell toxics.

I hope to see that principle become law this year.

Senator Randolph.

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator RANDOLPH. Thank you, Mr. Chairman.

As we recall, the Superfund effort in the Congress brought to fruition a very important measure in late 1980, and we have gained, since that time, a fuller appreciation of the dangers to our citizens and communities by hazardous substances.

Early in the implementation of Superfund, it became apparent that the problem was more widespread than even the members of the committee had realized. The Environmental Protection Agency has placed 546 contaminated sites on its national priority list. It estimates that as many as 2,200 sites may require urgent cleanup action at a cost of between $8 and $16 billion. This 5-year program, with the authorization of $1.6 billion, is inadequate. For this reason, our able chairman and I have joined with other Senators in proposing legislation—and we did this last year—to extend and broaden this crucial effort.

I hope that we can, Mr. Chairman, move expeditiously, as you have indicated, this year—not next year. I won't be here next year, and I want to work with you this year to bring it into being.

Senator STAFFORD. I want you to know how sorry I am that you won't be here next year.

Senator RANDOLPH. Thank you. We have been together a long time.

Senator STAFFORD. Yes, we have.

Senator RANDOLPH. Yes, indeed. And it is good, always, to work with the chairman of our committee.

This year we need to enact the legislation even though the existing law does not expire until 1985. As we consider proposals to compensate the victims of exposure to hazardous materials, I think of the original 1980 proposals, and we addressed, at that time, damage to property and harm to people. It was necessary to remove victim compensation from the final version, but I am convinced that assistance of this type is needed. And I am glad that the committee is going to again carefully review this critical problem.

The Superfund was created to help correct dangerous sites involving hazardous materials. This activity is the last component of a comprehensive set of environmental tools. It complements the Clean Air Act, the Clean Water Act, and the Solid Waste Disposal Act in providing the ability to correct the most serious environmental problems. This list is only a partial list, Mr. Chairman, of landmark legislation that came from this committee to the Senate floor.

Our economy certainly produces many substances which have necessary, vital uses. But they can be dangerous to life and property if they are handled incorrectly or disposed of in an improper fashion. The long life of many of these materials makes the dangers even greater.

The 1976 amendments to the Solid Waste Disposal Act provided a means to regulate the use and disposal of these hazardous materials. Superfund permits the correction of the abuse. That is the

importance of it. Negligence or illegal disposal of these wastes are important issues.

In West Virginia, we do know that there is a real need for this legislation to work. Through our extensive and diverse commercial industry we produce in West Virginia large quantities of hazardous substances. Our State has consistently rated among the top 10 in the manufacture of materials which are considered to be hazardous. The citizens of West Virginia, therefore, are concerned that they should not be exposed to unnecessary dangers in the workplace or in their homes.

The industries which comprise an important part of our State and its economy deserve guidance, deserve assistance, to keep their operations from imperiling nearby communities.

Four sites in West Virginia are now placed on the EPA priority list for cleanup under Superfund. These are in Nitro on the Kenawha River; in Follansbee, the upper part of the State, on the Ohio River; in Leetown, where a national fish hatchery is located in Jefferson County in the eastern panhandle; and Point Pleasant, also, in the western part of our State, on the Ohio River.

These are locations that spread the entire breadth of the State of West Virginia. We are already seeing, in West Virginia, the benefits of this program, and we're seeing it in these four sites and many others.

Though Superfund is not perfect, we are hoping to make it more practical. We are addressing what I believe to be one of the most urgent and dangerous problems of the 1980's. That is, we must make substantial progress on the road to clean air and clean water, beyond what we have done at this time.

We are attempting to bring relief from hazardous substances, and that relief, we believe, completes the circle in the sense of major environmental legislation which will be needed in the foreseeable future.

I am talking longer than usual, but I think what we are doing now illustrates the complex and the far-reaching nature of the efforts in the Congress needed to protect the environment and the health and welfare of the citizens of all the States of the Union.

When I became a member of the Congress, and that was 51 years ago, we did not speak in terms of ecology or the environment. The earliest environmental programs were those related to our conservation efforts, carried out, as we recall, through the passage—and I was an active member at the time—of the Soil Conservation Service legislation. And that was during the 1930's. And then we had the Civilian Conservation Corps program.

I have been asked many times, Mr. Chairman, what I think is perhaps the most significant environmental achievement since the original Earth Day was observed in 1969. I remember it well. I said, and I continue to believe, that the major achievement of the last 15 years has been the growing commitment of the American people to environmental values and the incorporation into our everyday life of a means which we have at hand to reduce pollution and correct the abuses which continue.

And the laws we have developed, therefore, through this committee are the tools which help us to achieve this broader goal for a cleaner America. I think both the Senate and the House of Repre-

sentatives has to continue their efforts. There is an understandable interest, but we have to direct that interest to a concern and then to an achievement.

These hearings are going to be very helpful, and we hope that when the committee continues its programing, that we will think in terms of the further development of the Superfund program. I want to pledge my active assistance and full cooperation of myself and those who work closely with me in my staff in this commendable effort.

Thank you.

Senator STAFFORD. Thank you very much, Senator Randolph. We are well aware of the cooperation and effort that you have made with us over the years in this committee.

Senator Mitchell.

OPENING STATEMENT OF HON. GEORGE J. MITCHELL, U.S. SENATOR FROM THE STATE OF MAINE

Senator MITCHELL. Thank you very much, Mr. Chairman.

It is appropriate that we renew our examination of the Superfund law today, where we stopped in 1980 on the issue of victim compensation. For over 5 years Congress has struggled to devise a method of compensating the individual victims of toxic chemicals. As we are all well aware, the Superfund law enacted in 1980 makes no provision for recovery of even medical expenses by such persons. The law does, however, permit recovery of expenses incurred when certain natural resources are damaged by the release of hazardous substances.

I said at the time that we passed the Superfund law that as to this issue the bill rested on a misguided set of priorities, which placed damage to property above damage to people. The victim compensation provisions which were dropped represented good public policy.

Almost 4 years have passed since then, and these provisions are even more necessary today than they were in 1980.

The guiding principle of the authors of the Superfund law was that those responsible for harm caused by chemical contamination should pay for the costs of that harm. That principle was abandoned in 1980 with respect to personal injury. As to such damages, the status quo remains. Society at large continues to pay for the human health damage caused by hazardous substances.

Under current law, a victim of chemical poisoning cannot seek from the Federal fund out-of-pocket medical expenses for an illness resulting from the action or inaction of another party. Indeed, as to the Fund itself, a guilty party cannot be held accountable for any damage it has inflicted on a person. Under the law, if a toxic discharge injures both a tree and a person, the tree's owner, if it is the Government, can promptly recover from the Fund for the cost of repairing the damage, but the person cannot.

In effect, at least as to the Superfund, it is all right to harm people, but not trees. This represents an unacceptable set of priorities by any standard of logic, commonsense, and basic decency. In my view, the question before us is not whether we should provide victim compensation, but rather how we should provide it.

Since 1981, I have introduced in each session of Congress legislation to provide for victim compensation. In this session I have introduced two bills which represent two different mechanisms through which victim compensation can be provided. The first provides access to the Federal Fund and to the Federal court system for persons harmed by hazardous chemicals. The second bill implements an administrative compensation system as recommended by a study group set up by the Superfund law.

We in the Congress have a broad range of alternatives from which to fashion a victim compensation remedy. I think none of us should be wedded to any particular approach, but rather use these hearings to learn what the most important and effective way to accomplish this objective is.

I reiterate, the question is not whether we should enact a victim compensation program, but rather what is the best way to do so. I approach this issue with no preconceived notion as to the best mechanism, only with an unwavering commitment to the enactment of victim compensation legislation during this Congress. Then and only then will we have addressed the real tragedy of the chemical poisoning in America, and that is, injury to human beings.

Mr. Chairman, through a very unfortunate conflict in scheduling, the Veterans Affairs Committee is this morning, at this very moment in fact, holding a hearing on legislation which I have introduced there, and I must attend that hearing for a time. I do hope to return to hear some of the testimony at this hearing, and apologize in advance to those whose testimony I will not be present for.

I especially want to take note of the presence of Congressman Florio of New Jersey, who, as we all know, has been a leader in this effort, and of our colleague Senator Lautenberg, also of New Jersey, who has been very vigorous in pursuing legislation in this committee and in the Senate which parallel the efforts of Congressman Florio in the House.

Thank you, Mr. Chairman.

Senator RANDOLPH. Mr. Chairman, may I comment?

Senator STAFFORD. Yes, indeed, you may.

Senator RANDOLPH. The chairman and I are also members of the Veterans Affairs Committee, and we hope you will explain to them why we are here and sending you there to do double duty today. Your leadership is acknowledged and recognized, and we are grateful for it. I am glad that I have been able to join as a cosponsor of the bill that you have mentioned.

Senator MITCHELL. That is the most important thing, Mr. Chairman. I appreciate your good wishes. I appreciate, even more, your vote.

Senator STAFFORD. Thank you very much, Senator Mitchell, and you might point out also, or we will here, that Senator Randolph and I have both served on the Veterans Affairs Committee since it was created.

Senator RANDOLPH. That's right.

Senator STAFFORD. Senator Lautenberg, do you have an opening statement?

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Yes, Mr. Chairman. I want to commend you for your commitment to move forward with this reauthorization and to double our efforts to clean up toxic wastes under Superfund.

Before becoming a member of this committee, I joined Senator Bradley, who is here now, in sponsoring two bills to extend and revise Superfund. I understand that Senator Bradley will be addressing the details of these bills, so I will not take the time of the committee to do so as well.

I must add, however, that these proposals are a start, a good start, but there are many more issues to address. We have got to go farther, and we have got to do it faster. The question we face is not whether we clean up—everyone from the President of the United States and industry to State officials, environmentalists, and victims, all agree that we must clean up—the question is when do we clean up? how well do we clean up? At the current rate, with current resources, it will be generations before the job is done. In the meantime, cleanup costs will rise, and more tragically, human costs, illness, fear and frustration will rise as well.

Mr. Chairman, delay is not acceptable. We should not and cannot afford to wait until next year to deal with reauthorization.

My State, which is ready to go with State matching funds, risks running out of Federal funds if we do not have reauthorization this year. Delay is just not acceptable.

Mr. Chairman, we send a clear message by hearing at this first session from the victims of toxic wastes. The message is simple: what is at stake isn't just property, it's people; toxics contaminate our water, they foul the land, they ruin people's lives. And it is incumbent upon us to repair as much as we can those damages as we try to contain the poison and try to restore the land and water.

I join you and Senator Mitchell, Senator Randolph, and the committee in an effort to forge a workable and acceptable system for compensating the victims. Mr. Chairman, Congressman Florio, from my State, whom I welcome to this side, has done so much to address these concerns and I know will be talking about the need for victims' compensation, among other issues on which he has taken a leadership role in the House.

I would also like to welcome my colleague from New Jersey, Senator Bradley, and Senator Kennedy, both of whom have contributed so much already to the effort to clean up toxic wastes in our State and our Nation.

Thank you very much.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

And now it is the committee's privilege to ask our most distinguished witness, with whom I have had the pleasure of serving now for some 13 or 14 years, Senator Kennedy, who will be the lead-off witness, if he will come forward.

STATEMENT OF HON. EDWARD M. KENNEDY, U.S. SENATOR FROM THE STATE OF MASSACHUSETTS

Senator KENNEDY. Thank you very much, Mr. Chairman, Senator Randolph, Senator Lautenberg, Senator Mitchell, and my other colleagues.

First of all, Mr. Chairman, I want to congratulate you for having this hearing, and the other members of the committee, for moving this legislation forward and for drawing the kind of attention that you have to what I think is one of the really outstanding health issues that is before this Nation.

I also want to commend you, Mr. Chairman, for giving the opportunity to families, mothers, fathers, who have, over a period of time, seen their children and dearest loved ones affected and impacted by what has to be described as a real time bomb in our society. Too often we in the Congress are listening to experts—and we have some distinguished experts from my own State of Massachusetts who have done yoeman work in this whole area of toxic wastes and toxic substances—but you are also giving an opportunity to listen to families and to hear from these families. Too often we in the Congress do not do so. So I want to express my appreciation for your willingness to do so.

The kind of information that you are going to hear from these families from my own State of Massachusetts are typical of the kind of anxiety that families, mothers, fathers, feel about their children on this issue.

So I express my appreciation to you. I do not want to trespass on the committee's time unduly, because I want the committee to hear from them. But there are just one or two items I would like to mention.

My interest in this issue stemmed from being a former chairman of the Health Committee during the period of the 1970's. The chairman of this committee is a member of the Human Resources Committee and is familiar with those studies and the work of that committee. You, Mr. Chairman, and Senator Randolph have been deeply interested in a variety of health issues. And as we saw during the period of the review of the quality of health in our society, we saw that the greatest dangers that were coming from cancer in our society were basically environmental. Then we saw, as a result of the course of the hearings, that it was the chemicals that are penetrating our water, our food, our air, that are causing serious kinds of health hazards for the citizens of this Nation.

It was difficult for us to quantify it, or to qualify it, really, but we knew that that was there. We commend you, and I welcome the opportunity to work with you, as on the initial legislation of 1980, and appreciate the efforts that you have made here now.

I would say in a very summary way, we need the resources to do the job. It is true that 5 sites have been cleaned up in our country, but we are aware that some 17,000 still exist. Five sites have been cleaned up primarily because of industry, not so much because of the adequacy of the resources—which have to be made available; I know that the chairman is very much aware of it, as well as Senator Randolph—but we have to be concerned about the whole issue of presumption.

In dealing with this problem, you will hear from these families from Massachusetts about how we found, in a small community and within a few streets of each other, the large number of birth defects, leukemia, kidney defects, within that community. They knew that they were drinking from this water, and the anxiety that they felt about trying to get studies done, the inadequacy of local resources to do the job, the inadequacy of State resources to do the job, and the frustration that they were feeling in trying to call upon the Federal Government, the Center for Disease Control that have the expertise to try to get the review to do it.

Then when we found two outstanding schools of public health, both Boston University and Harvard, able to reach the problem and show in Woburn and in Lowell the results of their studies and tying into these reviews, the kind of health hazards that children, primarily, and the families were impacted by, we should not depend upon the generosity of our schools of public health to do this job.

The Center for Disease Control and the administration of that agency that has been established should be fully staffed, should be fully funded, and the Center for Disease Control should be funded to the extent that they can do these studies.

These issues about the presumption, about the out-of-pocket expenses, I know that the chairman is familiar with my interest in that particular problem, have been included in S. 917. So I welcome the chance to cosponsor it.

Mr. Chairman, I know the chairman and Senator Randolph and Senator Lautenberg are very aware of the sensitivity that families have about talking about health problems. I think we feel, in our society, that the kinds of health difficulties that our families are impacted by is not an issue which we generally want to talk about. And so I think that all of us are very impressed with the fact that we have some very eloquent parents who are willing to share their sadness and the difficulties that they have faced over a period of time with this committee.

There is Anne Anderson, of Woburn, whose son Jimmie died of leukemia just a few years. There is Richard Toomey, whose son Patrick also died of leukemia. I had the opportunity to visit that child just a few days before the boy died.

There is Janet Brand, whose baby daughter suffers from muscular disorders. Patricia Kane, whose son Kevin fought leukemia for 7 years. There is Rita Pinard, whose children suffer from respiratory disorders. And there is Donna Robbins, whose 9-year-old son died in 1981 of leukemia.

So they are all here, Mr. Chairman, and it is a pleasure for me to have the opportunity to present them. I think they do a real service to this committee and to the country by testifying. I express again my appreciation to you for letting me present them. I know there will be other members who will speak before they do, but I want again to thank the committee for its indulging me the opportunity to make this presentation.

Senator STAFFORD. Thank you. Thank you very much, Senator Kennedy.

Senator Bradley, I think you are next. We know of your interest in this matter and of your cooperation with this committee in time of need. So we are very happy that you are here.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Senator Randolph.

Senator RANDOLPH. I wish to say that some persons may not realize the commitment made by first John Kennedy and then Robert Kennedy and then Ted Kennedy. All three brothers served on the Labor and Human Resources Committee. I want that as a part of the record.

Senator STAFFORD. Certainly.

Senator RANDOLPH. Thank you, Mr. Chairman.

Senator STAFFORD. Senator Bradley.

STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator BRADLEY. Thank you very much, Mr. Chairman, and Senator Randolph and my colleague Senator Lautenberg. I am very pleased to be able to be here today and testify on this most urgent piece of environmental legislation. The reauthorization of Superfund is critically important.

You and this committee are to be commended for beginning the process on this legislation, and I urge you to see it through to final passage this year. I pledge my wholehearted support. We simply cannot afford to wait. We have to reauthorize Superfund this year.

The record of the prior EPA administrator was a national disgrace. For more than 2 years, virtually nothing was done to confront the urgent problem of abandoned toxic waste dumps. It has taken more than 3 years, but the Superfund program is finally beginning to show results. In New Jersey alone, 16 sites are slated for actual cleanup work in 1985, 18 more sites will enter the design phase, and 21 sites will be the subject of feasibility studies.

That is 55 sites, out of a total of 85 in our State, in some stage of cleanup. Other States have similar plans.

For those ambitious work schedules to be accomplished, however, the Federal Government has to keep its part of the bargain. By this September, Federal funds must be available or the 1985 work schedule in New Jersey and other States cannot proceed. Uncertainty about Superfund's continued existence will obviously slow the process and delay construction, design, and feasibility studies.

As I said before, we must reauthorize Superfund this year.

Mr. Chairman, if we allow these programs to stall because Superfund is not reauthorized, we will only confirm what the public now suspects: that the Federal Government simply doesn't care. And quite frankly, I have sometimes felt that these suspicions were well founded.

We have moved far too slowly and have gotten bogged down in nitpicking debates between different levels of Government instead of digging in and getting the job done. In 1980 we made a promise to the American people. We promised that the hazardous waste sites that pollute their air and water and threaten their lives and the lives of their children would be eliminated. We are only now beginning to make good on that promise. We must maintain the

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momentum. We must eliminate these toxic waste dumps that continue to poison our country. The longer these abandoned waste sites are allowed to remain, the more people will be exposed to the threats of cancer and other health threats.

We must quit generating victims. That means cleaning up these sites.

The reauthorization must deal with two major problems. The fund is too small to do the job; and the law, as now implemented, is prone to unacceptable delays.

Senator Lautenberg and I introduced two bills, S. 1806 and S. 2012. The first, as many members of this committee who have cosponsored the bill know, would reauthorize the Superfund through 1990. No one now disputes the need for reauthorization. We now know that the magnitude of hazardous waste problems is even larger than we had earlier feared. Since we introduced the bill over a year ago, EPA has attempted to quantify the size of the job yet remaining. They now estimate that the task will require at least $8 billion. Mr. Chairman, we must raise at least this amount.

The $1.6 billion currently available is clearly insufficient to make a significant dent in the task of cleaning up these waste dump sites. Even if augmented by fines or contributions by private parties, the existing funds could clean up no more than an estimated 200 sites. And in the State of New Jersey alone we have some 230 sites in need of cleanup.

Extending the Superfund and increasing the resources available to EPA can begin to ameliorate this problem. Just as important, the extension must restore the faith of the American people that the Federal Government is indeed committed to protecting them from the threat of toxic sites.

The second major problem, unacceptable delays, is addressed in our second bill, S. 2012. S. 2012 is a package of amendments to the Superfund law that would allow us to accelerate our progress in cleaning up these sites. The bill has several parts. First, it would provide clear guidance to EPA regarding priority of activity: clean up the toxic waste dumps first, negotiate with the private owners second.

At one of the Nation's worst dump sites, the Lipari landfill in New Jersey, lengthy negotiations between EPA and the main waste generators delayed the cleanup for 2 years. Cleanup construction began only last summer, when EPA finally decided to use the Superfund for the cleanup.

Second, the bill would remove EPA's built-in bias toward low-capital-cost cleanup operations. I believe the 1980 law is clear about cost-sharing for operation and maintenance costs. EPA, however, has interpreted it to require States to pay 100 percent of operations and maintenance costs. This interpretation has created a built-in bias on the part of EPA toward low up-front cost options while political and fiscal pressures tilt the States in the opposite direction. This has led to delays in reaching EPA-State agreements.

A classic example of this is Price's Pit in New Jersey. In most sites there are two general approaches for cleaning up the site. One is excavation, the other is containment. Excavation entails high up-front capital costs and low operations and maintenance costs. Con-

tainment, on the other hand, entails lower up-front capital costs but high and variable operations and maintenance costs.

For example, the capital cost of the excavation option at Price's Pit in New Jersey could run $50 to $100 million, but there would be no long-term operations and maintenance costs. On the other hand, the capital cost of containing the pollution on site at Price's Pit would be only $5 to $13 million; the operations and maintenance costs, however, would probably be $30 to $50 million over a 20- to 30-year period.

With those facts, Mr. Chairman and members of the committee, is it any small wonder that the State and Federal environmental agencies have been arguing about which option to take? EPA says States should pay all operations and maintenance costs while EPA will pay 90 percent of capital costs. And while they argue, a plume of toxic waste is moving closer and closer to the entire water supply of Atlantic City, N.J.

EPA has a strong built-in bias toward low capital cost option. The States, on the other hand, have a strong bias toward high capital cost option. This bias is strongly reinforced by local opposition to containment options and strong preferences for getting the stuff out of our back yard. Local authorities are inclined to demand the greatest degree of cleanup possible, irrespective of costs, and since someone else is footing the bill, why not?

The bill that Senator Lautenberg and I introduced last year would realine the Federal and State incentives by making both capital costs and operations and maintenance costs subject to the same 90-10 cost-sharing formula. Decisions would be more likely to be made on public health cost-effectiveness calculations rather than on the basis of who pays for what.

The third provision I would like to describe is one I have discussed with several members of the committee. It's the State credit provision. Section 104(c) of the Superfund law allows EPA to give States credit for State expenditures at approved Superfund sites. As the Superfund law was written, we recognized that States ought to be allowed to begin to clean up—begin to clean up—at particularly threatening Superfund sites even before Superfund money was available. The State credit provision included in the Superfund law thus allowed EPA to repay States for their early cleanup costs.

This mechanism was a good one and should be used again as Superfund money begins to dry up, pending reauthorization. This State credit provision would enable States to pay for site cleanup with their own funds and then receive credits for these expenditures as Superfund money becomes available after reauthorization.

This would allow us to maintain the cleanup momentum. While we wait for additional funds to be earmarked for Superfund, we must not allow the feasibility and design studies to sit idle. The State of New Jersey is prepared to spend $100 million of its own funds to start the cleanup process at the most severe sites. But how can we expect them to make this commitment without some reassurance that they will be reimbursed for the work they do?

Without such an assurance, we are telling States such as New Jersey to sit on their hands—and their drums of toxic wastes—until EPA gets around to doing something. From an environmental health standpoint, and more importantly, from a public credibility

standpoint, the cleanup must begin without delay. Each day, the sites in New Jersey and in other States are slowly worsening, continuing to pollute the water, continuing to create victims. We can enable States to proceed without delay by allowing States to use their own funds and then allowing EPA to give them credit for other Superfund work as funds become available. States would be limited to approved sites on the national priorities list and would be subject to the terms of a specific EPA-State agreement.

This amendment I think is crucially important, and it is time-sensitive.

Our bill has four other important provisions that I would like to briefly list rather than go into detail on each one.

First, the bill removes the uncertainty now associated with the State's share of the cleanup costs in those cases where the State owned the landfill. We stipulate the State's share will be 50 percent in these cases.

Second, we would extend the deadline for filing claims against parties responsible for natural-resource damage to 3 years from the date the Department of the Interior publishes the final regulations. Mr. Chairman, this is a classic case of "Catch-22." Since no regulations were ever published, no one could apply; and now the deadline in the current law will insure that no one ever can apply. Since the deadline expired last December, we have heard from many States who noticed this provision in our bill and urgently asked that it be extended. The States of New Jersey, New York, Montana, Colorado, California, Utah, North Dakota, South Dakota, New Mexico, and Idaho have all asked for this extension.

Next, Mr. Chairman, the States would be given the authority to force EPA to take nondiscretionary actions in the event that EPA delays or refuses.

Finally, the bill would remove the current ambiguity surrounding State law preemption allowing States to impose taxes on chemicals.

Mr. Chairman, there is no more central role of government than to protect the public health and safety of its citizens. During the past several years, the Federal Government has had an abysmal record when it came to the cleanup of hazardous waste. I believe the administrator of EPA now wants to improve on that record. But good intentions are not enough. There are legislative steps that must be taken now to insure that the intent of Congress to get these toxic time bombs disarmed and to have it done now.

We must reauthorize Superfund and increase the resources available to it to accomplish its purpose. This must be done this year, and we don't have much time. And I say, Mr. Chairman, that I hope the committee will also have in its bill some form and process for victims compensation.

Again, I commend you for beginning to address these issues, and I commend you for your intent to examine the operation of Superfund and to seek ways to make it work better. I urge you to act quickly, and I pledge to work with you in any way I can. I feel that New Jersey is ably represented on the committee with Senator Lautenberg, and I know the committee will benefit from the testimony that Congressman Florio will provide immediately following my testimony. And I think that he comes to the committee with an

experience on this issue from the inception of the idea of Superfund.

So, Mr. Chairman, thank you for the opportunity to present the views on this issue. I hope to work with the committee in the weeks and months ahead for prompt reauthorization of Superfund and the strengthening of the law.

Senator STAFFORD. Thank you very much, Senator Bradley. I cannot resist the temptation to say that I think your statement has been a three-point score, and that we will join you in an all-court press to get this bill passed.

Senator BRADLEY. Thank you, Mr. Chairman. Now I understand what you were saying.

Senator LAUTENBERG. Mr. Chairman.

Senator STAFFORD. Senator Lautenberg.

Senator LAUTENBERG. I just wanted to compliment my senior colleague from New Jersey for his clear and precise review of the critical needs for getting action on programs and legislation to get these sites cleaned up. I am proud to be associated with him to cosponsor the reauthorization legislation. I urge the committee to heed this intelligent advice and get on with the job. And I thank the Senator for being here this morning.

Senator BRADLEY. Thank you.

Senator RANDOLPH. Senator Bradley, this record would not be complete without those of us on this committee recognizing the work that you did. I remember the lameduck session, as you do. I remember when Senator Byrd of West Virginia was our majority leader in those days. You were not a member of this committee, but you worked as if you were a member of this committee in reference to the amendment that Senator Stafford and I hoped might be passed.

I know of the action that you took in the Finance Committee and what you have done. I simply wish to bring out this one point that you have made. That is, that in the 1980 law we intended, as you recall, that the Fund would pay 90 percent of the operation and maintenance cost of a cleanup. States are to assure that preparation and maintenance take place, but the State's share of those costs is only intended to be 10 percent.

The agency has misinterpreted, Mr. Chairman, this provision, and we need to correct it at our earliest convenience.

Senator BRADLEY. Let me thank Senator Randolph very much for his comment in support of the 90–10 provision.

And how I do remember those days in that lame-duck session when we sat in those rooms for hours and hours and finally hammered out a bill. I appreciate very much your comment.

Senator RANDOLPH. Thank you.

Senator STAFFORD. Thank you very much, Senator Bradley.

Now we would be very happy to hear from Congressman Florio. I am going to reminisce to the extent of saying that during the long hours Senator Bradley referred to, when we were rather desperately trying to get this Superfund into law, that after we passed the Senate and got it to the House, I recall going on the floor of the House, since I had been a former Member, and being berated by a number of Members of the House for the Superfund bill, as it had come from the Senate, and then listening to a number of speeches

in opposition to it, and then Jim Florio taking the podium and making a resounding speech in favor of it.

Even after that, I recall listening to votes that should have been for it but voted against the adoption by the House, and I regret to say from my side of the aisle, until I became sufficiently discouraged and started back to the Senate, believing that the bill probably would not pass.

But as I walked in the door of my office, my administrative assistant said, "We won."

So, Jim, I know that you were the critical player in getting Superfund through the House. And we are especially glad to have you back here today.

STATEMENT OF HON. JAMES J. FLORIO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. FLORIO. Thank you very much, Mr. Chairman, members of the committee, particularly my distinguished colleague from New Jersey.

I want to touch briefly on seven major concepts that I hope that you will include in any legislation that comes from this committee and ultimately is passed into law.

They include significantly expanded funding levels; an equitable funding mechanism; a mandatory schedule for cleanup action; the establishment of uniform national cleanup standards; the whole question of how clean is clean; basic assistance to State cleanup programs; citizen participation provisions; and relief for individuals who are injured as a result of exposure to toxic dump sites, the timely subject of your hearing today.

As you may know, the legislation that I have introduced in the House would create a permanent Superfund which will exist until the Congress determines that the program is no longer needed. Funding levels in the first 5 years of the program would run between $1.8–2.4 billion a year, with a total of $11.2 billion in the first 5 years of the program, so that a massive cleanup effort can finally begin.

In succeeding years—that is, after the 5-year initial period—the funding mechanism would trigger back in during any year in which the Fund dropped below $3 billion. These funding levels represent a midrange of the figures which were recommended to my committee in the 8 days of hearings, some 50 hours of hearings that we had, by those participamts in the reauthorization process who came forward with specific proposals.

EPA Administrator Ruckleshaus told us that at a minimum total cleanup cost, only the 2,200 worst sites that the agency expects to place on the national priority list, would run between $8–16 billion. Several thousand sites—that is, the balance of the 22,000 sites that are categorized—would not even be addressed under this scenario.

Such cleanup cost estimates do not include funding needed for administration, long-term operation and maintenance of finished sites, as was addressed by Senator Bradley, payment of natural-resource damage claims, and, of course, relief for individuals who are injured. That is to say, none of those concerns would be addressed by the very conservative estimates that were offered by EPA itself.

Might I say that that 2,200-site scenario presupposes that those sites—that is, those sites which by definition are imminent and substantial hazards to people's health and the environment now today—those sites would be cleaned up under those estimates over the next 14 years.

Now, I don't know if anybody on this committee, but I suspect no one thinks that the American people are going to sign onto a scenario that takes us 14 years to clean up only the 2,200 sites that today are a hazard to people's health.

So what I am suggesting is that the EPA's figures of $8 billion, bottom line, is a very conservative minimal figure. State organizations, including the National Governors Association, urged us to provide $9–12 billion over the next 5 years. These funding levels from the National Governors Association include a strong recommendation that the Federal Government provide more assistance to State Superfund proposals.

Finally, the environmental community urged us in testimony to commit at least $20 billion over the next 5 years. These figures reflect a much more ambitious cleanup goal program and faster cleanup schedules.

What I am suggesting to you is that the funding levels that we have advocated are a midpoint among all of the proposals to come forward.

Second, the equitable funding mechanism concept. The legislation that I have introduced contains two basic funding mechanisms for a reauthorized Superfund program. First, I have retained the current feedstock tax base, expanding it somewhat to reflect the recent information we have developed concerning the sources of contamination at known and potential Superfund sites. Second, I have incorporated a funding mechanism strongly recommended by key segments of industry, the so-called waste-end tax system. Such a tax, by imposing fees on hazardous wastes disposed of at facilities licensed under subtitle (c) of the Resource Conservation and Recovery Act would both generate additional revenues for the Superfund program and serve as an incentive to decrease the amounts of wastes generated by industry. It is a noble experiment which deserves a fair trial in any reauthorization program.

But I would stress that I view the waste-end tax funding mechanism as a supplement and not in any way as a substitute for the basic feedstock system which has served us so well and which would provide us with the certainty and security of funding resources required to clean up. I think it would be a big mistake to in any way shift the majority of the burden of supporting Superfund to this as yet untried funding mechanism; that is, the waste-end tax.

The concept of a mandatory schedule, with the benefit of 20–20 hindsight, I believe many of us who were involved in formulating the original Superfund legislation can now see that one of our fundamental mistakes was to omit any mandatory schedule for cleanup action. By allowing EPA almost complete discretion over how and when to spend the funds, we created a situation which contained no safeguards against the administrative abuses of the Gorsuch-Lavelle era. That is to say that we presumed that there would be a good-faith effort to go forward in a manner that was desirable

and compatible with the public interest. That presumption was obviously unfounded. We should not in any way allow those types of abuses to take place.

Therefore, we should provide a program that places the agency on a stringent yet feasible mandatory timetable for cleanup action.

Third, there is the concept of national cleanup standards, uniform national cleanup standards. A second gap in the current program is the absence of any uniform national cleanup standards, the question of how clean is clean? After years of floundering, EPA can do better than fashioning such critical decisions on a site-by-site basis. The confusion caused by such an approach has worked to the detriment not only of the agency and its State partners, but also of the affected communities and even potentially responsible parties. Any legislation reauthorizing the program should require at a minimum that EPA adhere to the environmental protection standards contained in other major national environmental laws when conducting cleanups at Superfund sites, so that the American people know that the money that has been spent will in fact clean up these sites to some objectively determinable level of safety and security.

Next, assistance to the States. The States have identified three top priority proposals as essential to their continued ability to participate as constructive partners in the Superfund program.

First, they have recommended that the Federal Government assume in their stead all responsibility for long-term operation and maintenance costs at the finish site. Senator Bradley went into very explicit and appropriate detail as to how that confusion currently works at odds with the thrust of the program.

Second, they ask that we repeal the current interpretation that the law preempts the States' taxing authority for their own Superfund programs. Some of us have a question as to whether it does or not. Court decisions have come forward and said that it does not preempt the States' authority to have their own funds.

But we should make it clear and unequivocal that there is no preemption that takes place.

Third, they ask—the States ask—for assistance in running Superfund programs at the State levels. The legislation I have introduced contains all three elements. In dealing with the last question—that is, funding for State programs—I have rejected the notion of outright grants to the States for this purpose, adopting instead an approach of allowing States to apply their administrative expenses toward their 10 percent matching share of basic cleanup costs.

Many States have yet to either fund their own programs or sign cooperative agreements with EPA which are the predicate for cleanup action within their borders. I think we have to act to address the States' concerns or risk a fundamental breakdown of the program in the years ahead.

The legislation that I have introduced contains several key provisions giving affected communities a legal voice in EPA's cleanup decisions. All of these provisions are crucial to the restoration of public trust in this program that has not been as successful as it should be, largely as a result of abuses that have taken place at EPA.

Lastly, the question of relief for individuals who have been injured. The legislation that I have introduced contains badly needed provisions authorizing relief for individuals injured by exposure to hazardous substances. You are going to hear, I am sure, some very good testimony. Many of the people who are testifying here today have testified before my committee, and their testimony is eloquent evidence of the need for this type of relief.

You can remember, I am sure, Mr. Chairman, that we were compelled to delete these provisions in the last-minute compromises that were essential unfortunately to pass this bill in 1980. Instead, we commissioned a study by a blue-ribbon panel of legal experts. I am very pleased to say that the chairman of that panel, Mr. Lautenberg, was James Lazalli, former attorney general of the State of New Jersey, who did an excellent job in bringing forward recommendations. That panel was composed of representatives of the American Bar Association, the American Trial Lawyers Association, the American Law Institute. They were charged with the responsibility of evaluating the adequacy of the current legal system to redress injuries in the toxic tort field. The conclusion was clear that the existing system is woefully deficient and that there is a need to revise the system if people are to have remedies for injuries.

In fashioning such provisions, I was strongly influenced by your legislation, Mr. Chairman, and also by legislation that has been introduced by Senator Mitchell. My legislation builds on the concepts contained in those Senate proposals and contains three different kinds of relief.

First, individuals, when they are able to show that they have been exposed to hazardous substances at levels posing a significant risk to their health, can submit petitions to the EPA Administrator and become eligible for emergency relief to terminate such exposure and to fund health effects studies to further increase our understanding of the effects of toxic substances on human health.

My legislation would also require that the Agency for Toxic Substances and Disease Registry, which was established under the Superfund, compiled toxicological profiles of the 100 worst chemicals found at Superfund sites.

The second provision of my legislation would also set up an administrative system to provide limited relief for individuals injured by exposure to hazardous substances. Claimants able to prove that there is a reasonable likelihood that such exposure could have caused the injury they suffer can recover limited medical expenses and lost income for a period not to exceed 5 years. Workplace exposure is not covered by this system, and any private insurance recovery is deducted from the amount of the award recovered through administrative proceedings.

Funding for the program comes out of Superfund but cannot exceed 12 percent of the Fund in any circumstances.

The last element of the legislation dealing with victims' relief is a Federal cause of action which may be pursued in either State or Federal courts, involving standards of strict, joint, and several liability. Once again, workplace exposure is not covered, and private insurance recoveries are offset against final damages.

I am firmly convinced that we cannot afford to allow another reauthorization cycle to go by without facing the growing problems experienced by people who have been injured by toxic exposure.

Industry opponents of such relief continue to insist that any effort to redress such injury is a solution in search of a problem. The logical inconsistency of this position, it seems to me, is obvious. We are not spending all this money to clean up these sites because of aesthetic considerations. We are spending this money to clean up these sites because we acknowledge the fact that they constitute a public health menace. The public health menace is to people. And therefore, the inconsistency of providing, as others have made mention, for redress for damage to trees and natural resources and not providing for remedial relief to individuals is just so obvious that it doesn't have to be dwelled upon.

Mr. Chairman and members of the committee, I am very pleased to be able to share with you some of these thoughts and certainly pledge to you my cooperation as we go forward.

I want to emphasize the need to deal with this problem this year. Mr. Ruckleshaus came before my committee and in what I regarded as one of the more embarrassing performances that I have had before my committee, attempted to clarify what the President said in the state of the Union message, when we thought that the President advocated reauthorization this year of Superfund. The clarification resulted in the explanation that the President really meant that he opposed reauthorization this year and that, in fact, might support reauthorization next year after the election, contingent upon the outcome of certain studies.

That clarification was revealing, and I thought it's interesting that everyone else is now in favor, in the abstract at least, in reauthorization this year. And we'd hope that this committee, as it has stated, would go forward as rapidly as possible.

Senator STAFFORD. Thank you very much, Congressman. We share your interest and determination in acting this year, and we very much appreciate your coming over and sharing your thoughts on legislation with us today.

I have no questions, but I can assure you of our mutual cooperation.

Senator Randolph.

Senator RANDOLPH. Yes. Thank you.

Representative Florio, you are very knowledgeable in this field, and we commend you for your efforts.

In your closing remarks you mentioned the appearance of Mr. Ruckleshaus, and I recall that when the Administrator, Mr. Ruckleshaus, came before us in a recent hearing on the budget for EPA, he indicated that EPA was not planning to submit detailed estimates of the need for Superfund action until September of this year. Is that your understanding?

Mr. FLORIO. Well, we understand it will not be until after the election, next December, when any detailed proposal or legislation will be submitted.

Senator RANDOLPH. I thought that's what you were stating. But whether it's September or December, we couldn't get action this year. It couldn't be helped. Is that right?

Mr. FLORIO. Senator, it is beyond dispute that the administration's position is that there should be no authorization this year. It's clear—now it's clear—notwithstanding the state of the Union pronouncement, it has been clarified to the point that we accept the fact that the administration is unalterably opposed to any reauthorization this year.

Senator RANDOLPH. Would you not agree then that an all out effort, not a timid approach, should be made by all of us so that something will be done by late May of this year?

Mr. FLORIO. Absolutely, Senator.

Senator RANDOLPH. Do you feel that that might find a receptive action in the House if we can do it in the Senate?

Mr. FLORIO. We are working very hard to try to do that, and I would hope that we would be able to place a good, responsible piece of legislation on the President's desk sometime prior to November.

Senator RANDOLPH. We do know that when you speak of victim compensation, that this is a very important matter. I do not want to toss figures into the air, because the amounts are so large, but it seems that EPA does not realize, at least at this point, the amount of money that will be needed. Is that your feeling?

Mr. FLORIO. Well, we have not received any estimates from EPA, but I would suggest to you that we would put in our bill—and certainly your committee is authorized to do what it sees fit to do—we put an absolute limit on the amount of money for victims' compensation out of the Superfund so as to deal with the argument that some would say, that we would deplete the Superfund moneys for cleanup with the victims' compensation proposal. That was not the intention, and we think that there is no difficulty in doing that.

The concept was followed in 1980 by putting an absolute limit on natural resources outlays out of Superfund. So the precedent for that approach is clearly in the law.

Senator RANDOLPH. Well, then, the cleanup and the victim compensation in a sense can come together, and it would seem to me that instead of a few billion dollars—and I am not sure you would agree with this—we're looking towards $10 billion, aren't we, in a program of this type?

Mr. FLORIO. On victims' compensation?

Senator RANDOLPH. Yes, sir.

Mr. FLORIO. Well, not necessarily.

Senator RANDOLPH. Well, the combination I have mentioned, the cleanup and the victim compensation, they are separate and apart and yet they are together.

Mr. FLORIO. They are together, I think is more appropriate.

Senator RANDOLPH. Yes.

Mr. FLORIO. And of course, one component of the victims' compensation concept, the Federal cause of action component, has no cost ramifications for the Superfund proposal.

Senator RANDOLPH. Just a further comment. Representative Florio, an important feature of our 1980 law is the postclosure liability fund, and I had something to do with that amendment. I believe that the value of this separate fund in assuring a community that's asked to host a hazardous waste management facility that those funds will be there to cover any future possible problems.

I think just now we're beginning to see the demonstration. Yet there are those in the administration and in the Congress who seek to repeal the postcloture provision. I don't think you agree with that statement. In the 1980's I had the feeling that you felt that we need this. Is that correct?

Mr. FLORIO. In the 1980 act we put that in. In the legislation that I have introduced we have retained the postclosure fund. There have been proposals that have been made that there is a need for some modification in the postclosure fund which I am openminded with regard to reviewing and maybe making modifications in that system.

The postclosure fund, of course, is somewhat separate and apart from Superfund in that it deals with a fund for the RCRA disposal sites so as to insure that when those sites are closed, that there is a mechanism for dealing with environmental problems that may result after a prolonged period of time.

But it was put into the Superfund bill, and I am sure there will be suggestions made to address it in the Superfund authorization.

Senator RANDOLPH. Representative Florio, many Members of the House and many Members of the Senate have legislation that they believe should pass both bodies and be signed into law, or at least the President should have the opportunity to veto or to agree that the Congress has acted as he would desire.

Where do we stand on legislation of this kind in the House for the moment?

Mr. FLORIO. The House is now—there is legislation that has been introduced that has been referred to the Energy and Commerce Committee, which I sit on. There is legislation that has also been referred to the Public Works Committee. Those are the two major committees of jurisdiction.

My subcommittee has held, as I said, extensive hearings. We are trying to mark up a bill. We have not been successful yet in reporting out a bill. There have been proposals that have been offered and, in my opinion, ratified the status quo, which is woefully inadequate.

This is a contentious piece of legislation, in that it is a piece of legislation that has a number of people in the private sector, some in the public sector, who support the abstract ideals, the idea of the bill, but the real hard question comes down to money, who is it that's going to pay the money? The equitable funding mechanism is going to be the hardest thing that we have to deal with. You will find, as you hear from industry people, each industry person saying, "Yes, it's a good idea, but let the other part of the industry pay the bill."

Our leadership responsibilities are going to be fulfilled by saying, "This is the absolute dollar amount that is needed, and this is how it is that we are going to apportion the dollars."

I thought from the premise that the major responsibility should not be a burden of the general taxpayer. That was the essence of what we did 4 years ago and said there should be some correlation with those who contributed to the problem in paying for the problem. Whereas 88 percent of the Superfund comes from industry, particularly the chemical industry, petrochemical industry, only 12 percent comes out of general revenues. I think that is a good break-

down, and would hope that what we do would be largely along those divisions.

Senator RANDOLPH. I am just checking with Mr. Cummings here in reference to the West Virginia picture for a moment. We are in touch with the chemical industry in West Virginia, which is perhaps the largest chemical center in the world. That is, in reference to what we call the Kanawha River area in the Charleston section of our State, and other areas. We are trying to discuss these very matters with industry because we need to know exactly how industry feels even though we might or might not agree with industry in all of its concerns.

Mr. Chairman, do you feel that we can, in this year, pass a bill that is effective and have it approved in the Senate?

Senator STAFFORD. Well, I would say to you, my good friend, that if we could do it in 1980, I am sure we could do it again this year.

Senator RANDOLPH. I think we can.

Now, Mr. Florio, do you think we can, or are we going to bog down?

Mr. FLORIO. No, I think that to the degree that there is more sunlight shed on this issue, to the degree that we can get something to the floor of both houses, the American people will demand that this legislation is passed.

The difficulty we're going to find is in the inner recesses of the committee cloakrooms. The opponents, the real opponents, of the legislation won't prevail outside, they will prevail in the area of placing obstacles in the path of the bill, referrals to multiple committees. So that will be the approach.

So those of us who feel strongly about the need for the bill this year are just going to have to put our procedural house in order. We are going to have to just put our head down and move forward in a very direct way, overcoming those procedural obstacles and those other obstacles, to get it out in the sunlight where it will pass.

Senator RANDOLPH. It's difficult to pass.

Mr. FLORIO. Yes.

Senator RANDOLPH. But I think we can do it.

Thank you.

Senator STAFFORD. Thank you, Senator Randolph.

Senator Lautenberg.

Senator LAUTENBERG. Very briefly, Mr. Chairman, I want to thank my distinguished colleague from New Jersey for his informed and persuasive presentation of his concerns, his knowledge and his contribution to the safety and health of our citizens—not only in New Jersey but throughout the country.

His leadership in this area is one that is acknowledged by all, and his recommendations should be heeded by members of our committee, and certainly members of our body. I thank him for the attention and skill that he has brought to this.

Jim, it's nice to have you here. When you were closing your comments, I was interested in something you said. You said that the President wanted to suspend this pending the outcome, and I thought you were going to say, "the election." Instead, you said, "of the reports." I think it's probably the first one first.

Mr. FLORIO. I try to be as nonpartisan as possible.

Senator LAUTENBERG. Yes. And I agree with that.

In fairness, not to defend Administrator Ruckleshaus, but Bill Bradley and I had a chance to chat with him yesterday, and he conveyed to us that he would likely recommend the President sign anything that we get through our respective houses. I think that's a bit of an incentive to go to work and not stand here flailing our arms and saying, "The President won't." But we ought to force the issue here.

It is a nonpartisan issue, and we've talked about the safety and health of our citizens, and we ought to just get on with the job.

I would ask you this question: Is it worth reauthorization—I address this to the chairman of the committee as well—is it worth reauthorization if we simply extend the life by 5 years and the financing system for that period of time, raising it from $1.6 billion initially to $3.2 billion, this with the hope that as time passes and when the urgency is felt, that we can refine or perfect it?

I am concerned because I see in New Jersey, and I believe in other States as well, there is an inclination to either panic and try to get things done before that period of time runs out and that they are up against obstacles placed in their way by bureaucratic procedure.

So I ask the question whether or not all else failing, and I think we should strive for something broader and better financed than that which we have, is it worth trying to just get a simple reauthorization and the funding at least with the level we have, with a chance to bring it up to higher levels in the future?

Mr. FLORIO. Senator, I would just suggest to you that if we kept the law as it is now and just extended it, there are so many problems in the law, and not deficiencies in the law, just ambiguities which have been seized upon by those who are not interested in doing too terribly much, discretion that has been exercised in a way that is antithetical to the major thrust of the law.

For example, some of the projections, some of the projections of the administration as to what it's going to cost, that I maintained $8–$16 billion, were premised upon recovery from private sector contributors of 40 percent of the need. Well, that comes nowhere close to what it is that's been done. There has been virtually no recovery.

As you recall, the law says that everything that is spent out of Superfund, that EPA is charged with the responsibility of seeking after compensation to have the fund replenished. Well, that hasn't happened in the past, and there is no reasonable prospect for thinking that EPA is going to be diligent in going after the generators to seek compensation.

The funding levels of $1.6 billion, it's estimated—and we're doing some projections now—it's estimated it will take 100 years to clean up the priority sites at the level of $1.6 billion.

So I would suggest that it probably is not desirable that we merely reauthorize the law at funding levels that are close to what they are now with no changes in the law. The cleanup standard question, that certainly we don't want to dupe the American people into thinking that what we're doing is cleaning something up, when we have subjective standards that when interpreted some, particularly those who had been at EPA, in fact were not cleanup

standards, that in fact we would spend x million dollars and have no big benefit being achieved for the public health.

So I think there is a need to correct at least minimally those things which I have touched on as deficiencies in the existing law, largely not deficiencies in any sense of badness in the law, just to close the discretion and to put mandatory schedules that are reasonable but yet will keep someone's feet to the flame to make sure that something is done.

New Jersey is a good example. Four years after this program has been established, we have not got one single site cleaned up. We have one site where any money has been spent in any actual remedial work. That's not a record that we really want to sign on to duplicate over the next 5 years.

Senator LAUTENBERG. Right. And my concern is the reception that expanded legislation gets when nothing thus far has happened. Now, if simply extending the authorization 5 years doesn't hasten the process, doesn't get some of the sites removed, then of course we should not do it.

But I am looking for some kind of a ground that makes sense to our citizens, that will encourage the business community to participate, and at the same time make the taxpayers aware that there is a cost for this abuse of the environment that has gone on for many years.

I thank my colleague again for joining us here. Jim, your record and concern for this has distinguished you and our State. And I am pleased to share this morning with you.

Mr. FLORIO. Thank you.

Senator STAFFORD. Thank you very much, Senator.

Congressman, you are welcome to stay if you would like to. We know you may have other commitments this morning.

Mr. FLORIO. Thank you very much.

Senator STAFFORD. We appreciate your appearance here.

I would say to my friend and our new colleague on this committee that we have no intention of settling, in this committee, for a mere extension of the program at its present level of funding. And with an old football coach as the former chairman of this committee and now its chairman emeritus to help us design the plays, I think we're going to go from basketball to football and say we're going to win it this year.

Senator LAUTENBERG. I salute the efforts of the chairman. It's a delight to serve here.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Senator Randolph.

Senator RANDOLPH. Alluding to football, in 1928 it was my privilege and responsibility to take the Davis and Elkins College football team from the high hills of our State over to the Severn River, where we were to play Navy. It was the opening game for the Navy, and they considered it a very easy game. It was very hot, 89 degrees. We defeated the Navy 2–0.

It's not important to mention just that 2 to 0 victory, but we never made a substitution. Eleven men played the whole game. It looks like we're about up to that situation now. A certain number of people have got to see that this job is done.

Senator LAUTENBERG. Here, here.

Senator RANDOLPH. Thank you.

Senator BURDICK. Will the Senator yield?

Senator RANDOLPH. Yes.

Senator STAFFORD. We have another American football player from Minnesota here.

Senator BURDICK. How did you do when you played North Dakota?

Senator RANDOLPH. Well, we won one and lost the other. We played the University of North Dakota, and that was in Grand Fork. It was snowing, I remember, and then we played the Aggies at Fargo. But we broke even on that trip. But I am one to say that I remember your dad. I served with him in Congress. He was an All-American football player.

Senator STAFFORD. We could carry this further if you had also come up and played the University of Vermont.

Senator RANDOLPH. Yes.

Senator STAFFORD. Senator Burdick, do you have any statement you would care to make now or have placed in the record?

Senator BURDICK. I am just interested in the witnesses.

Senator STAFFORD. All right. In that case, we will hear from our first panel, and that will be: Mrs. Anne Anderson of Woburn, Mass.; Mrs. Janet Brand of Lowell, Mass.; Mrs. Patricia Kane of Woburn, Mass.; Rita Pinard of Lowell, Mass.; Ms. Donna Robins of Woburn, Mass.; and Mr. Richard Toomey of Woburn, Mass.

If you would all come to the witness table, we would appreciate it.

Senator STAFFORD. We know how important your testimony is going to be to this hearing and to what we may be able to do with the Superfund program in the Congress this year. So it is with a special regret that I have to tell you that the Senate never seems to have time enough to do anything as thoroughly as we should. And in consequence, I think you have been warned, and I will have to ask you to try to make your statements within 5 minutes.

The Senate has been running now for some time, and we now are in danger of rollcall votes at any particular time. So to the extent you can, if you will, please limit yourselves not to exceed 5 minutes.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Yes, Senator.

Senator RANDOLPH. I don't want to cut you off, but I want to take 20 seconds when you're through.

Senator STAFFORD. Why, certainly. I am about to be through, so this is a good time to comment.

Senator RANDOLPH. We have a situation which we are constantly faced with. I feel that it's absolutely wrong for committees to meet while the Senate is in session.

Over and over again we find witnesses who come before this committee at their own expense, and then we may have to rush out and leave the witnesses sitting. I have seen that happen over and over again.

I have offered so many, many times, and I am going to keep at it in the coming months, that we should have legislative days. We should have committee hearing days, or at least the day should be divided for a period of hearings, and then a Senate session for dis-

cussion, debate, and possible action. Or perhaps separate days for the committee hearings and separate days for the consideration of measures in the Senate.

I know that will never happen. But it is absolutely a wrong procedure that we now follow, and I just mention it again and again. I have tried to do something about it, and we had a special committee once studying it. Recommendations were made, but nothing has happened. It's a procedure that isn't fair to the witnesses, not that this committee is not fair to the witnesses. But we should have clearly defined hours in which the Senate would be in session acting and the committees would be in session acting at a different time.

Senator STAFFORD. Thank you.

Senator LAUTENBERG. Mr. Chairman.

Senator STAFFORD. Senator Lautenberg.

Senator LAUTENBERG. If I might just, since this is still a learning experience for me and I have the wisdom of three distinguished colleagues here to rely on, I wonder if it would be out of order, Mr. Chairman, to ask if we can extend a little bit more time to the witnesses, and if we are called away, if it's possible to recess for those minutes while we vote. These people have traveled long ways.

Senator STAFFORD. Well, whenever we run into a rollcall, we will try to handle that as well as we can. We come back from rollcalls and continue with the witnesses.

Senator LAUTENBERG. I have had a chance to review some of the things that they are going to discuss.

Senator STAFFORD. Yes; right.

Senator LAUTENBERG. Their testimony is essential to our decisionmaking process, and I would like to ask your indulgence to see if we can give them as much time as we can.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. We always do that.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Senator Randolph.

Senator RANDOLPH. As I have discussed with you, I must be in a conference with the majority leader, Mr. Baker, and four or five other Senators beginning at 11:30. I wouldn't ordinarily do this, but I must say that I must be there, of course, because he has a schedule that calls for us to come at that time. But it will be my purpose if we are still in session, to come back and to listen to these witnesses. They are the heartbeat of the subject matter that we are considering today.

Senator STAFFORD. That's right. Surely.

Well, I hope in the next 20 minutes, Senator Randolph, we will be able to hear four of them. And that is a hint, ladies and gentlemen, if you ever heard one.

Ms. Anderson, we would like to hear from you first.

STATEMENT OF ANNE ANDERSON, WOBURN, MASS.

Mrs. ANDERSON. Thank you for this opportunity——

Senator STAFFORD. I should warn you, the microphones we have are some of the world's poorest. It will be necessary for you to speak directly into it close up.

Mrs. ANDERSON. Thank you for this opportunity to speak before you today. My name is Anne Anderson. I live in Woburn, Mass., a community which is located 10 miles north of Boston and which has borne the burden of toxic wastes for over 120 years.

About a mile from my house is one of the largest and most dangerous toxic waste sites in the Nation—Industri-plex 128. This site was one of the first listed on the EPA's national priority list, and still nothing has been done to contain the arsenic pit, which is the size of a football field, or the huge lagoons filled with cancer-causing chromium wastes.

Due to the increased demand for water in our growing city, two wells were dug about one-quarter of a mile from my home—G Well in 1964 and H Well in 1967. The water from these wells had a foul odor, a peculiar taste, an odd discoloration, and ate away our plumbing.

Despite our pleas to city officials, we were continually reassured that the quality of the water was good.

We moved to Woburn in 1965 with our 2-year-old daughter Christine. It was a nice suburban neighborhood and seemed like a good place to bring up children. And so we added to our family a son, Chuck, in 1966, and another son, Jimmy, in 1968.

In 1972, when Jimmy was 3½ years old, he was diagnosed with acute lymphocytic leukemia. We were told that his treatment would be long and painful. And it was. The pain and suffering he had to endure is indescribable and unforgettable.

Very soon after Jimmy's diagnosis, I became aware of and concerned about what seemed to be an elevated incidence of leukemia in my neighborhood. The initial three children that I knew of became four, and then six, all within about one-half mile of each other and all drinking foul water.

The connection between the illness and the water was very clear in my mind, but I didn't know enough. I could find no one to support my theory and had little time or energy to devote to it myself because of the care that Jimmy required.

The Reverend Bruce Young, my pastor and one of those who helped with the transportation to and from the hospital, listened to my concern. Initially, he tried to dissuade me, but gradually began seeing more Woburn faces at the hospital. Then there was another child diagnosed from the parish. And finally, in 1979, Wells G and H were found to be contaminated with several organic chemicals, including trichloroethylene, a suspected carcinogen.

It became apparent that the only way to obtain the information that we needed was to place an item in the local newspaper requesting parents of leukemic children to attend a meeting so that accurate statistics could be ascertained. From this information we drew a map pinpointing each case. We found 16 cases in the city, 8 of them in my neighborhood, diagnosed between 1969 and 1978. Where there were eight cases in 10 years, the expected incidence would have been less than one case in a period of 15 years.

Since that time, it has been a long and difficult road with many obstacles. But from Jimmy I learned to fight, because of what he taught me. He was a small, frail, sick child who refused to give in. He would not give up, and neither will I.

For a time, after Jimmy died 3 years ago, I felt my Government had been and was continuing to let me down. I am sure it was my grief that was contributing to my negative attitude, but my mistrust and disappointment was very real and not entirely unfounded. Gradually, when I began thinking more clearly, I realized there were some Government officials that had been standing beside us, and only through them had we been heard.

I believe in my country. It is made up of caring people, but they can't care about something they know little or nothing about. I want them to have a sense of what happens to innocent people, to children when they have been exposed to poisonous toxins. I want them to understand the insidiousness of these harmful chemicals. I want them to know no one is entirely safe. I want them to hear me when I say that we cannot and will not tolerate our innocent children to sicken and die and be expected to accept it without a fight.

We do not think that what has happened in Woburn happened by chance. While we carried our children in our wombs, while we nursed them and weaned them to drink from a cup, we unknowingly offered them the poisons that their bodies could not withstand, through the water they drank.

We believe our water, water that is so necessary to life itself, was contaminated by the pollutants of industry. I have believed this for a long time, and I have never heard any evidence to convince me that I am wrong. Conversely, the more I learn, the more I know, the more convinced I am that our children have suffered and died needlessly. I won't, nor should I be expected to, quietly accept it.

Jimmy has a brother and a sister. Through the nine years of his illness, while children themselves, much was expected of them. They didn't understand why everything always depended on how Jimmy was feeling and what he was capable of. They had to adjust to someone else caring for them while Jimmy was in the hospital. They will never know how much they missed, but they do know that our family life was different from their friends. There was a freedom and carefreeness that they could not often be part of, and seldom when they entered their home. Home was where Jimmy needed his rest. Home was very often hushed and tense. Home was making allowances for their brother, finding ways to entertain him, or just being there with him.

They were still children when they watched their brother die. They must live the rest of their lives without him. Life has been difficult for them, and if there is a way to make their future easier, then I would expect those that are responsible for all that has happened to offer compensation. I would expect that they would accept it as their moral obligation.

For 9 years, every time I looked at Jimmy, I looked death in the face. I was grateful for his touch. I thanked God for every day we had him. And his life was intensely important.

Those circumstances can pretty much put things in perspective. One realizes that health and happiness are what is important. But the real world demands that the necessities be paid for, including the expense of a catastrophic illness. We who are paying so dearly in every way must bear the additional burden of financial strain. How many ways must the innocent pay? How can this be allowed to happen?

Only if industry is made to assume its responsibility will they stop the indiscriminate disposal of the chemicals they produce and use. I believe they have a responsibility to my children. I think they owe them better than what they now have. Whatever it takes to make their life better for them should be theirs.

If you turn your back on us, you turn your back on decency and compassion and invite more innocent victims and more heartache. I appeal to you today to use your influence and exert your leadership on behalf of those who depend upon a caring, sensitive, and just government.

I know what I ask of you will not be easy to accomplish. But we must do everything possible to minimize the possibility of future victims and demonstrate to past victims that we care. Thank you.

Senator STAFFORD. Thank you very much, Mrs. Anderson. We realize that this may very well be a very painful occasion for several of you as witnesses, and so we are doubly grateful to you for coming here and describing the situation for this committee. It will make us work harder to see this doesn't happen again in the future, as far as we can in terms of legislation, not only dealing with hazardous waste sites that exist, but in other laws such as the Resource Conservation and Recovery Act and the Clean Water Act, in determining as far as we can that the situation that has caused so much distress in Woburn does not occur in the future from new sources of pollution in this country.

The next witness will be Mrs. Janet Brand of Lowell, Mass., who formerly lived in Woburn.

STATEMENT OF JANET BRAND, LOWELL, MASS., FORMER RESIDENT OF WOBURN, MASS.

Mrs. BRAND. My name is Janet Brand, and I am from Lowell.

I will give you a brief history of Silresim. Silresim was opened as a hazardous waste recycling plant in 1971. As early as 1973, it received violations from our DEQE, or department of environmental quality engineering, in the State of Massachusetts. In 1976 it was cited with direct dumping of hazardous material into the city sewer system, causing six workers, city workers, to be overcome by fumes.

Still, nothing was done. It remained open.

In 1977, the gates were finally shut. In February of 1978, the DEQE, the EPA, and the owner of Silresim were told what was in every tank and barrel on the site, including radioactive material, trichloroethylene, benzene, toluene, PCB's. There was 150,000 gallons of hazardous wastes left on this 5-acre site.

In 1982 Silresim was placed on the Superfund national priority list. It is now 1984, and we are still in a ramp.

It took neighborhood organizations to keep pushing to get us on EPA's Superfund list. That is just a history. I will give you my statement now.

I live approximately 150 yards from the Silresim hazardous waste site. I come before you today to urge you to incorporate victim compensation into the Superfund law. I am a wife and mother of three children, ages 11, 3, and 10 months. During our years residing at our current address, our children have suffered numerous ailments. My 11-year-old daughter has had rare strep in-

fections, and unusually rapid glandular growth, the latter resulting in surgery. My 3-year-old son has had numerous upper respiratory infections, ear infections which were resistant to normal drug therapy. And because of this, surgery was also necessary. He has had chronic viral infections.

We have attributed these illnesses to the site because when we take our children away for the summer, they are healthy and without symptoms. As is stated on the witness list, I was also a resident of the Woburn wellwater acid pit site. Our 11-year-old daughter was born with musculo-skeletal abnormalities and a mild hearing loss.

These illnesses have left us financially drained, with unpaid bills totaling approximately $1,500. Our property has also been valued at approximately a thousand dollars less than what we paid for it 2 years ago. We have suffered both financially and emotionally because of hazardous wastes. What has happened to our American dream?

Senator STAFFORD. Thank you very much indeed.

The next witness will be Mrs. Patricia Kane, who is from Woburn, Mass.

STATEMENT OF PATRICIA KANE, WOBURN, MASS.

Mrs. KANE. My name is Patricia Kane. Both my husband and myself were born and brought up in Woburn. I have four children: two girls and two boys, the youngest being my son Kevin.

Kevin was diagnosed with acute lymphocytic leukemia in June of 1973. He was treated with chemotherapy for 7 years. He has been off all medication now for 4 years. And 2 years ago he asked his doctor, Dr. Truman, at Mass General, "Will I ever get that leukemia again?" He was told, "No, we consider you cured."

In leukemia each child is put on a protocol. Every child is given all treatment necessary. Some children are given more. My son, the first year, he received 176 injections I myself administered some at home. Now they find that medication given orally is just as effective as the injections, so they no longer give all those injections. Of course, some medication must still be given intravenously.

Also, children receive medication into their spinal cord to pass the blood-brain barrier. Kevin also received a series of radium treatments to his head, at which time he lost all his hair. They now know that the radium treatment, thank God, is not necessary, that just the spinal medication is all that's needed.

Most children are treated with chemotherapy for 3 years, some for 5. And in Kevin's case, he was treated for 7 years.

Leukemia is a terrifying disease, the diagnosis shattering to both the child, parents, brothers and sisters, and grandparents. And in our case, they have died before knowing of Kevin's cure.

Actually, leukemia is a family disease. Each life in the family is affected. My children being only 2 years apart, were also quite young to understand what was going on.

I can remember once sitting with my husband at night and looking at the family cat, when Kevin was first diagnosed, and trying to figure it out. And knowing that cats get leukemia, I said, "Do

you think our cat could have had anything to do with Kevin's getting leukemia?" And, of course, he said, "No."

And I asked him, "What would you do if you found the answer now? What would you do about it?" Now we find that we were drinking contaminated water, and that water was contaminated by careless disposal of toxic wastes.

We have come here to prove to you gentlemen that the responsible parties should be made to compensate for the years of painful treatment and the many years of uncertainty. The financial help would certainly soothe—it will never heal.

I would now like to put the question that I asked my husband, to you, our elected officials who have the responsibility and the resources, to help answer this: "What are you going to do about it?"

Thank you.

Senator STAFFORD. Thank you very much, Mrs. Kane.

The next witness will be Mrs. Rita Pinard, who is of Lowell, Mass.

STATEMENT OF RITA PINARD, LOWELL, MASS., ACCOMPANIED BY KATHRYN MARIE PINARD, LOWELL, MASS.

Mrs. PINARD. Good morning. And thank you very much.

My name is Rita Pinard, and I am from Lowell, home of the Silresim hazardous waste dump site. Please let me thank you again for being here to help us.

I live with my husband Jean and my three daughters. I am really not sure where to begin to tell you the effects we have felt, living close to a toxic waste site. Not only has this been physically and emotionally draining, but financially as well. This has been a continuing nightmare for us, and has completely disrupted our lives.

We only connected the health problems with the chemicals back in 1980, but had been exposed since 1977, and were not aware of it. Our health problems began in February of 1977, 1 month after moving into the area. We had been healthy prior to moving into the area.

Our oldest daughter Rachel, then 6 months old, began to develop chronic ear and throat infections, skin irritations, constant colds, coughing, croup, and other related upper-respiratory infections. My husband and I also developed problems. Jean began having allergy symptoms such as headaches, runny noses, watery eyes, sore throats, wheezing and so on. For me, it was uterine bleeding, bladder and urinary infections, constant colds, headaches, and nosebleeds.

We became aware of the immediate danger when a serious fire of exploding barrels caused injury to our firefighters and sent billowing clouds of dangerous toxic smoke into the air. There was always this obnoxious, nauseating odor in the air, which would smell worse on really hot summer days.

When we would call the city to complain about the odor, we were repeatedly told that it was a broken sewage pipe underground in need of repair and when they had the money, they would get to it, when in fact it was the chemicals we were smelling.

We joined the Lowell chapter of Massachusetts Fair Share, a citizens action group. At this time, Jean and I were only half aware of the Silresim issue. Upon meeting with other families in the area, we learned about all the work that had already been going on to try to clean up the site and how the State had already spent a certain amount of money at Silresim, but only half the job was done when they ran out of money.

I became pregnant in 1979 and had some vaginal bleeding and had had trouble putting on weight. I was really sick with bronchitis, constant colds, and there was some concern that I would miscarry. Throughout this time, my husband Jean and Rachel continued to be sick almost weekly. We were beginning to think none of us would ever be healthy and possibly we were one of those unfortunate couples just going through a bad time.

It wasn't until July of 1980, when our second child Elizabeth was born, that we connected the chemicals with our illnesses. Elizabeth was jaundiced until she was almost 7 weeks old, and was hospitalized at 8 weeks with viral encephalitis. She would experience trouble breathing at home and would be wheezing badly. I would rush her to the doctors or to the emergency room at the hospital, and by the time we would get there, her symptoms would be gone. Upon returning home, they would redevelop, and she would have difficulty all over again. That held true as well with our headaches. It seemed that they would always go away whenever we weren't around the house, and upon returning, they would come back.

We really became suspicious upon learning that most of the other neighborhood children and adults were experiencing the same symptoms we were, and that they were constantly ill and on medication. To give you just a brief glimpse of what we were going through, within a 7-month period our daughters together developed 13 double ear infections—that is, both ears infected at the same time—and 10 strep throats. In addition to this, during the same amount of time they developed bronchitis, croup, urinary infections, and were finally hospitalized with tubes in their ears.

This amount of sickness in both children is not normal. Already, a doctor from Boston, a leading doctor, excuse me, from Boston, who is a professional in this field, called my husband and me to inform us that our children and we were experiencing chronic symptoms of what the particular chemicals we were exposed to caused.

At this point, Jean and I were fed up. Not only were we physically sick, but emotionally as well. We started to become overwhelmed with doctor bills. The children had become immune to most children's-strength antibiotics and needed adult strength. My husband missed a tremendous amount of time from work, and I had to give up my day-care business. At the time, I could not even go out to work with two kids who were sick all the time. Whom would I have left them with?

Usually, when things are going bad, we usually can resort to that famous old saying, "Well, at least we have our health." Well, in our case, we didn't even have that. We got behind in all our monthly bills, lost our life insurance, and still have none. To this day we still have not been able to pick up a life insurance policy. We cannot afford it.

Our credit is bad. We could not even get a lousy $500 loan to buy an engine for a car when we blew the engine last summer.

We were raised to believe that our Government would be there in our time of need, and especially to protect us from something that we could not even see. But we learned differently. It became a daily chore to call our city manager, State reps, and anybody involved who might help us. We really had to light a fire under their buns—if you will excuse my expression—to get any action.

We were outraged upon learning that the city and State were made aware of the problem at Silresim back in 1978, and chose to ignore it, hoping it would go away. The report claimed, and I quote, that, "Fire, explosion, and the release of hazardous chemicals in the air were the principal threats to the public health, and that all industrial abuttors and nearby residences should be evacuated."

That was in 1978. Here it was, 1980. Nothing had been done, nor was anything being planned to be done.

As our momentum started to build, so did the neighborhoods 'involvement. We finally—we were finally getting somewhere with DEQE and the EPA to get on the Superfund list. It has taken years of fighting, begging, picketing, doing anything we needed and had to do to get any action.

After my husband Jean had become quite ill in February of 1982—and I have had both my husband and the baby hospitalized at the same time—we were really scared. What was becoming of our family?

After several patients brought to the attention of Dr. Michael Gilchrist, a leading pediatrician in Chelmsford, about the problems at the site, he decided that he would come down himself to tour the site, and felt after he saw the site that there was no doubt in his mind that we were being poisoned.

He sent us to Massachusetts General Hospital, who were also convinced that the blood disorders our girls were experiencing were related somewhat to the chemicals. In all, we had the attention of three doctors who all felt it was a must we relocate immediately. They even wrote us letters urging us to do so.

We finally did relocate, leaving behind a two-family home we had planned to purchase for ourselves, thanking God that we were only renting, because the people who owned their own homes were stuck there and could not sell.

The change was miraculous. We were not in our new apartment a few days when we noticed that our headaches and constant nausea went away. The girls' cough and runny noses had stopped. Their appetites increased, and they were sleeping through the night. In less than a month, their ears completely healed and the tubes came out. We were feeling wonderful. The change was from night to day.

It will be 2 years in July since we moved away. Do you know that our children in all this time have not been sick, not once? Not one ear infection, not one strep throat, not one infection—bladder, urinary. Colds, I am able to nip in the bud in a couple of days. No viruses, no nothing. It's incredible. And my husband and I are also feeling very good. At least we're hoping right now that this will continue.

Unfortunately, we are the true guinea pigs, and it is through us that they will truly see somewhere down the road just what being exposed to these chemicals cause. And we do worry about long-range health effects. Cancers take 5 to 30 years. We worry about genetic damage to our children's offspring. These are all things that we cannot see today.

We still right now are trying to dig ourselves out of the financial hole Silresim has left us in. We continue to be plagued weekly by collection agencies who are threatening to take us to court. We have borrowed money from family days before we are supposed to appear in court. And it just doesn't end. Right now, our immediate bills still, after being away from the site for 2 years, we still have a $1,500 balance with our pediatrician. That's sick office visits. That's a $1,500 bill that we have not been able to pay. That's just one doctor. That's not area hospitals that, after Blue Cross-Blue Shield would only pick up 80 percent, we would be left the rest. That's not all the money, the thousands of dollars we've spent for prescriptions, the inconvenience of having to go back and forth to Boston, the time out of work. There is just no end to it. There just isn't any end.

We are fortunate that our health has returned. As you can see, our new baby Kathryn is in excellent health. She was conceived and born after we moved away from the site, and there is a tremendous difference in her health.

Unfortunately, I have left behind hundreds of other families in the area who are not as fortunate as I to have been able to get away. They cannot sell their homes because they are forced to tell people that if they buy their homes, they have to tell them about the chemicals. Would any of you purchase a home that was saturated with chemicals in your backyard? No, you wouldn't.

And none of us has seen a penny from anybody, and we need your help. We desperately need this legislation passed. Without you, I don't know what we'll do.

At any rate, I thank you very much, and I hope that you will do all that you can do to help us. Thank you.

Senator STAFFORD. Thank you very much, Mrs. Pinard, for a very moving statement.

Mrs. Donna Robbins, from Woburn, we would be very happy to hear from you.

STATEMENT OF DONNA ROBBINS, WOBURN, MASS.

Mrs. ROBBINS. Thank you. My name is Donna Robbins. I was also born and brought up in Woburn. I am the mother of two beautiful sons, Robbie and Kevin. Robbie would have been 12 years old this past March 15. He died, however, at the age of 9½ in August of 1981. Robbie was diagnosed in October 1976 with acute lymphocytic leukemia. We spent a period of 3 agonizing months of pain before he was actually diagnosed. In that 3 months, Robbie experienced the intolerable bone pain which would cripple him for 4 and 5 days at a time to a point where he couldn't walk or even turn in his bed.

Senator STAFFORD. Mrs. Robbins, could you bring the mike up a little closer? I see if I don't ask you to, the technicians are going to do it anyway.

Mrs. ROBBINS. Yes. Did you hear the first part?

Senator STAFFORD. This is so that our guests can hear, as far as we are concerned.

Mrs. ROBBINS. In that same month, Robbie experienced the intolerable bone pain which would cripple him for 4 and 5 days at a time, to a point where I had to turn him over in bed because he was in so much pain. He would cry with the pain and ask, "When will it stop?" He had to be carried to the hospital two and three times a week for blood tests during this period of 3 months, but nothing ever showed.

I began to feel emotionally drained and guilty, wondering what have I done to this poor little boy? He was only 4½ when he became sick, and I had brought him into this world.

This was just the beginning of what was to come. Finally, on the morning of October 13, the doctor called with the news that Robbie had leukemia and to rush him into Boston as soon as possible. I was relieved to know at last what was causing the pain, but what I didn't realize was that there was more pain to come over the next 5 years. This was just the beginning.

The IVs, bone marrows, spinal taps, X-rays, radiation, blood transfusions, infections, and pneumonia, all the chemotherapy, not to mention the side effects, both approved and experimental chemo—and you're damned if you do and you're damned if you don't—the temperatures, the vomiting, mouth ulcers, diarrhea, sick days out of school from low blood counts, tutors for the periods of 2 months that he had missed from school, bleeding problems, isolation from friends, anemia, no crowds, exposure to other baldheaded children, those of whom died before he did, a ravenous appetite, a loss of appetite, sadness, anxiety, humiliation, staring people, loss of control, depression, questions about what happens to people when they die—and he asked many times, "Am I going to die?" How do you answer your child?

The expenses for medicine, doctors, parking, babysitters, treatments, emergencies to the hospitals and doctors, the mental pain on the second and third relapse, and more pain to come, a grieving brother, family, and friends—tears, tears, and more tears over the needless death of my son.

More pain was still to come. I had gone for a divorce at the same time Robbie was diagnosed. The divorce took its toll on me and the children. I ended up being an AFDC recipient and with medicaid benefits, that you may appreciate, which I am thankful for, or—I would probably be in debt for $200,000.

Now I am almost through my senior year of college. I don't see an end to doctor bills for many years to come, because my son Kevin, who is now 9 years old, has a difficult time dealing with his brother's death and has been seeing a psychologist for the past 3 years.

I have already received bills for Kevin for $3,000 to $4,000 due to billing errors, which took 2 years and many notices to the collection agency to correct.

Both my sons have asked me, "Why do people put chemicals into the water we drink?" What do you tell them—"Because it's the most cost-effective way to make a profit by not being responsible

for proper disposal"? Tell them that, "People in industry do not care"?

I do not believe that anyone who would be directly affected by exposure to contaminated drinking water would deliberately do this. But I do believe the chemical industries and those who are responsible for dumping toxic wastes are ignorant and blind.

Those politicians who are easily swayed by the dollars of the industries sit on the same bench with these polluting industries. I would like to know how interested they really are and who is really polluted? It is most apparent their interest is not toward protecting the people. Many Government agencies, such as the EPA, DEQE, local and State health agencies, are supposed to be in the best interests of the people, and not against them. How naive do Government officials have to be to sit back and say that the increased rate of leukemia and birth defects could not be attributed to our contaminated drinking water?

How would you feel—and what side would you sit on—if you were told that industry contaminated the water you drank, like we drank, if your child was diagnosed with leukemia, like ours were? And just how would you deal with holding your child in your arms as you watched him take his last breath and felt him die?

Now we should hear which side you would really sit on. Should we be surprised if EPA comes out with a report praising Harvard School of Public Health and F.A.C.E. for all the time and experts' work put into the health survey? We expect it. But it's not going to be very surprising to us if it's put down.

I think it is time for our Government to be the experts, to protect us and stop ducking their heads. Something has to be done to tax the chemical industries to make them pay for poisoning our children. Thank you very much.

Senator STAFFORD. Thank you very much for a very good statement.

Now the final witness on the panel, Mr. Richard Toomey, also of Woburn, Mass.

STATEMENT OF RICHARD TOOMEY, WOBURN, MASS.

Mr. TOOMEY. Good morning, gentlemen. First, I would like to say that it's hard to talk of these things without tears and anguish. This is for myself and my friends here. So if I don't make it through it, please forgive me.

My name is Richard Toomey. I reside in Woburn, Mass. I am 48 years of age, and I am married to a wonderful woman named Mary. I am a father of four children, two sons who have gone back to God.

[Pause.]

Excuse me.

One was killed by an automobile, and the other died of leukemia. We have two daughters who reside with us in Woburn, one daughter Mary Eileen, who is 18 years of age, and Sheila Ruth, who is now 2 years of age.

My son Patrick was diagnosed as having leukemia on August 15, 1979. He was not expected to live through the weekend.

Senator STAFFORD. Mr. Toomey, you just take your time.

Mr. TOOMEY. But with the grace of God, and a lot of loving and expert care by the doctors and nurses at the Massachusetts General Hospital, and a 10-week period of torture and anguish, he was finally brought into remission. For the next 19 months he was in and out of the hospital and also in and out of remission.

I do not have the words to tell you of the feelings of frustration and anxiety and of the rollercoaster ride of these 19 months and of the pain Pat suffered through it all. He was very brave. Even at the very end, when he knew he was to die, he asked that we take him home. And we did. A week later, he died in our arms. That was on March 25, 1981.

The experience of all this has taught me that even with the pain and torment for you and your loved ones, you have to still pay your bills, and the inability to do so is an added burden. And to know that in your mind and heart that this burden was caused by the careless interjecting of chemicals and toxic wastes in our drinking water and that we do not only have to pay the penalty of the loss of our son, but also the cost of medication, hospitalization, transportation, for the deeds perpetrated by others is overwhelming.

The cost of hospitalization—I have brought a few of the bills—will attest to this. It is only a part, because there is parking, gasoline, transportation, special meals to make my son feel better, because he couldn't hold anything down, or of the small bribe so he would suffer the pain a little less, or for a meal out that after spending 12 to 14 hours in the hospital for tests, transfusions, medication, and all other bills, put aside because at that time, his comfort and health are all that matters.

But to a computer which sends out your electric, gas, telephone, and mortgage bill, there's no letup. They want their money, and they want it now, which is their standard. It's not wrong, it's just impossible, because as a workingman, I live, like most people, from paycheck to paycheck and not making a large amount of money, must decide which bills get priority.

In my mind, there is no doubt, what will make the time Pat had left more comfortable. He came first. And so the bills got behind.

In closing, I would like to thank the members of this committee for their patience and their goodwill and to say that may God help you in your efforts and to give you clear minds and hearts to understand the problems, both mental and financial, of the people who are the victims of pollution and toxic wastes.

Thank you.

Senator STAFFORD. Thank you very much, Mr. Toomey.

The Chair and the committee appreciate that this has been a painful session for all of you. And we are doubly grateful to you for the fact that you are here.

We will continue these hearings until we have completed all of the witnesses and all of the questions. We may have to recess for a few minutes so that my colleagues and I can go and vote and return.

In the meantime, the Chair, if there is no objection, is going to reserve to all of the members of the committee, especially those who were not able to be here this morning, the right to submit some questions to you in writing for your response, if that would be agreeable. And I hope it will.

There are three separate committees to which the chairman belongs and which are all meeting this morning in competition with this one. Even we have discovered we can only be in one place at a time.

Let me ask you this, all of you, and in a one-liner, to use the modern phrase, if you had only one message to give this committee, what would it be, knowing our human limitations?

Mr. TOOMEY. Help us.

Senator STAFFORD. Yes, sir.

Mr. TOOMEY. And others who are being financially burdened by toxic wastes, and to clean up.

We have had 5 years of study on removing toxic wastes. Nothing has been removed; everything is still sitting there. We've been monitored, and it's been sent. That's it.

Senator STAFFORD. Action and victim compensation, I guess is what you're saying.

Anybody else have a comment?

Mrs. ANDERSON. Well, we the victims do not have the strength and resources that the chemical industry has, and I would like to see the chemical industry assume the responsibility. However, if they can't do that, then it would be incumbent upon Government to do it or to be forceful and aggressive enough to see that industry does.

Senator STAFFORD. Thank you.

Any other comment, or do you all agree with the two that have been made?

I see you are nodding your heads affirmatively.

Each of you believes that you and your family have been wronged, but there are many people in this country who suffer from the same diseases and illnesses that affect you and your families. Why should you be compensated, but not the others?

Does anybody want to answer that question?

Mrs. KANE. Well, actually, it is proven that our wells, our drinking water, was contaminated. And there is a lot of tragedy in the world, and there is a lot of deaths, and everyone being compensated, you couldn't possibly do that. But if, in fact, you know that we were affected and it had a lot to do with causing the leukemia in our small area, then by all means, there is no question. It's industry had disposed carelessly of wastes that went into the ground, into the big plumes, infected our water wells. Our children were sick, suffered, as you all know.

There's just no question that there shouldn't be some compensation to people that can be proved that they definitely were victims of hazardous wastes. That's my feeling on it.

Senator STAFFORD. The chairman doesn't want to put a statement in your minds, but would it be fair to say that you believed that everybody who has been, through no fault of his or hers, injured by the release of toxic chemicals to be compensated for the damages that occur and flow directly therefrom? Would that be a fair statement?

I see you're nodding your heads affirmatively.

Mr. TOOMEY. Well, in Woburn, for example, the average would have been 0.9 people with leukemia. We had 22. And then when you find through the study that naturally you're only—the stuff

that's in there causes this, then to us it's credible to say that, "Yes, they should be compensated because definitely was done by toxic wastes."

I had a son who had died by an automobile. I am not going to say to the chemical industry, Pay for my son's death. He was killed by an automobile.

Senator STAFFORD. All right. Thank you.

Has the Government, whether it's local, State, or Federal, been of any help to you during your long struggle?

Mrs. BRAND. In the 2 years that I have been involved in Silresim, the Government, local government, has been very superficially supportive, not in there with us as a citizen group fighting for cleanup. The State government has run me over the coals. We've had a letter requesting our son be—requesting or saying he should be removed from the area. And they said:

> OK, Janet, you do all these things we want you to do, and you put your 2½-year-old son through 29 allergy tests, you know, multiple blood work, and then we'll do what you want us to do.

Four and a half months later I got a letter in the mail saying, "We're sorry, but it's precedent-setting, so we're not moving your son."

The EPA has been a little bit more responsive, but they still need a lot of prodding. It's time. Too much time, and they've studied and studied and studied.

Senator STAFFORD. Any different response from any other member?

Mrs. ANDERSON. We have found in Woburn that some of the representatives of the agencies have been most helpful, have done all they can. But I think that they have to work within the constraints of their agency, and they have to answer to those that are in policymaking decisions. I think that that's our problem. Their heart is in it, but they are constrained.

Senator STAFFORD. Thank you very much.

I am going to have to recess the committee so that we can go and vote. Senator Mitchell has gone over, and he will be back within 5 minutes, I expect, and he will restart the meeting until I get back here. So if you are willing, as they say in the military, to stand at ease for a few minutes, we will be back and we will continue.

Thank you.

[Recess.]

Senator MITCHELL [presiding]. The hearing will resume. Have the other witnesses left?

We will take a moment to allow them to return because I have a series of questions that I will address to all of the witnesses and ask them to respond in turn. We might as well have them all hear it at one time if they are going to be here.

I join the chairman and the other members of the committee in thanking each of you for coming here today. We recognize how difficult it was for you to make your statements regarding the deep personal tragedies which you have experienced. I hope very much that what you have gone through here today will not prove to be in vain.

You have set forth a series of tragic events, compounded, I think, by a tragedy that those who most oppose the type of legislation that would deal with the problems you outline were not present and perhaps will not hear your words. Your testimony was as moving and as persuasive as any that has been spoken in this room, and I think perhaps in any meeting room of the Congress in this or any other year.

I read a recent article in a publication called the Environmental Reporter, quoting a man named Michael J. Horowitz, who is counsel to the Director of the Office of Management and Budget, who on March 20, in a speech to the insurance industry, expressed—and I now quote the article:

> The administration's strong opposition to legislation providing compensation for injuries allegedly linked to exposure to hazardous substances in the environment where the causal relationship has not been established.

He urged his audience to join him in opposition to this legislation in what he described as "a matter of principle."

I only wish that Mr. Horowitz were able to be here today and to hear your words to understand where in this controversy the principle lies.

Perhaps we in our own way, inadequate I am sure, will be able to debate with him and others the message you have given us today.

I would like to ask a series of related questions, and then ask each of you to respond in turn as best you can.

The legislation which I have introduced would provide for reimbursement of medical expenses out of the Superfund for persons injured as a consequence of toxic waste discharges.

I would like to ask each of you if you are aware of the figures, or if you are not, to estimate them, and tell us what total amount of medical expenses your families have incurred in connection with toxic discharges; what attempts you have made, if any, to obtain compensation for those expenses; what the results of your attempts have been; what the principal obstacles to obtaining any compensation have been; and as a consequence of your own experience, what form of compensation do you think we should make available in this legislation?

It is a series of questions, but they are all related to the same thing, and I thought it best to ask them all together and ask each of you now to answer in your own words as best you can, responding to as many of the questions as you can.

Why don't we begin with you, Mrs. Anderson? If any of you want me to repeat them, I will be glad to do so.

Mrs. ANDERSON. I have never determined the amount, the total amount, of the bills incumbent upon us because of Jimmy's illness. I can tell you that at tax time we were aware of thousands of dollars that came out of our own pocket.

During the course of his treatment, most of his medical expenses were covered by our insurance company. However, because of the extensive costs, what was left for us to pay was in the thousands. This is a statement from the hospital of his last month of life. It's 28 pages long, and it's over $30,000. And that's—it would just give you an indication of the medical expenses that go on for years and years and years.

Senator MITCHELL. Have you made any attempt to be compensated or reimbursed for that?

Mrs. ANDERSON. To my knowledge, there is no compensation. At one time I tried through the Leukemia Society to get some help for the bills, and they couldn't do that. Because we went through the Mass. General Hospital, the Jimmy Fund was not available to us. They only serve those who go to Children's Hospital. So there was no help for us.

Middle-income people are left with no help from the government or no help from anywhere.

Senator MITCHELL. Thank you, Mrs. Anderson.

Mrs. Brand.

Mrs. BRAND. Our total from May of 1982 until 1984, and this includes what insurance has paid, part of what insurance has paid, is $4,020. That does not include the mileage, the gas, the meals that you have when your kids—when you take them to Boston.

Basically, now what is outstanding is roughly $1,500. I tried to seek compensation for one particular test, series of tests, that the State insisted that our son have, and for $48 it is now just being paid a year later. And in turn, that doctor's office sent us to a collection agency. It has been paid now, but as far as trying to get any compensation, our answer was, "Well, we don't have any way to do that, Janet. There's no way."

So it's going right up against a brick wall.

Senator MITCHELL. Thank you, Mrs. Brand.

Mrs. Kane.

Mrs. KANE. I am basically the same as Anne. We never really sat down and figured out what it all cost. Our bill now at Massachusetts General, other than what our insurance covered, which was 80 percent, is $4,000. That's ours.

Senator MITCHELL. That is your portion, so that is 20 percent of the remaining bill?

Mrs. KANE. Yes. Yes. Fortunately, Kevin wasn't hospitalized in and out like a lot of the children.

The big thing is the transportation. We went into Boston sometimes every single day and parking, we were usually in there for the day; and the extra meals, et cetera, like that.

Also, Kevin now has problems with his teeth. Certain second teeth stopped growing while he was getting this certain chemotherapy, so he's missing second teeth, and a lot of his second teeth come in with cavities, all very minor. We still have them.

So approximately, that's about the only figure I can give you.

Senator MITCHELL. Well, did you make an effort to obtain compensation from any source for that portion that you paid?

Mrs. KANE. I did the same as Anne. I called. Yes, I called the Leukemia Fund. When you're going through this, it's awfully hard. And I got basically the same answers that Anne did, that Leukemia Fund carried the children from Children's Hospital, and we were going to Massachusetts General. And I believe they said something about that they pay for X-rays or something like that.

Kevin's radiation treatment to his head, we did pay that after what insurance paid. I am trying to think at the time if it was $500 or something like that. I don't know.

But other than that, we're middle-class, too, and there's no other resources. I did go to the United Fund initially, only because I knew that it was going to entail a lot of medical expenses. And the gentleman there told me that, "You let the insurance pay and so forth, and you let us know whenever, you know, that you need our help more from there." Well, fortunately, the insurance just kept paying, so we really haven't started our part in this medical coverage to the hospital.

Senator MITCHELL. Thank you, Mrs. Kane.

Mrs. Pinard, please.

Mrs. PINARD. I don't have everything exactly written out right now, but I do know from memory and from some of the recent bills that I tried here on the plane to tally. I have got right now, I suppose, with hospital bills and present bills, probably around $7,000. We still have an outstanding bill of $2,000 that needs to be paid.

This doesn't include mileage. It doesn't include not only nonprescription medicines like probably, God knows, maybe I went through a hundred bottles of Robitussin in 5 years' time between all of us at $4 per family-size bottle; all the—all kinds of things that you needed, like, gosh, I can't even think. Just all kinds of things in general, children's Tylenol, adult Tylenol. When we would get cuts and they wouldn't heal because our blood wasn't clotting properly or something, it was gauze pads. All this adds up to money.

Just the time lost from work. I lost my day-care business. I had a very successful day-care business. I was doing day-care in my home. We were just renting, but still it was revenue coming in. And of course, upon learning about the chemicals there, would you bring your child to me knowing that 150 yards away was a known abandoned toxic waste dump site? Of course, you wouldn't.

So I lost all the money. How could I even begin to add up that kind of loss? Just the—just in general, like I said, time lost from work. And we did try to get an awful lot of help from everybody. We went to the VA. My husband is a veteran. He served in the Navy during the Vietnam war era, and yet they wouldn't give us the time of day. My husband for a family of five right now brings home $14,000 a year, and that just doesn't—it just doesn't—it just isn't enough.

We have—our rent is over $400 a month. Food for the five of us is at least $200. He works out of town. He has to use his own gas. It's $100 just a month to get back and forth to Bedford. This is—and you know, it just doesn't end.

What I wanted to also mention was that not only—and I can say for us all—when we've got all these medical bills that we have to pay, you have to realize that when you're dishing out $50 and $100 sometimes a week in antibiotics because when one of your children comes down with something, the other one has to be put on antibiotics so they don't come down with it, and the doctor finds out after 2 days, after the child being on an antibiotic, that the $15 bottle each antibiotic that you bought for them on Monday isn't doing the job and you have to go out and spend $30 on Wednesday each for a bottle, this is what I am saying, that you cannot keep putting out that kind of money and still be meeting monthly bills.

So not only in addition do we have all these medical expenses, but we are probably—and I can speak for most of us—probably behind on monthly bills, like this, and I am behind two months each on my gas and my electric. And I only pay them $50 every month when I get the second notice that they're going to shut me off every month. And I usually end up borrowing it from family, my personal family, sisters, my mother, and my mother-in-law that we have borrowed money from.

So it's really a vicious circle. It's, you know, you're doomed if you do and you're doomed if you don't, but you take every day at a time because it's the only thing you can do.

Senator MITCHELL. Thank you, Mrs. Pinard.

Mrs. Robbins.

Mrs. ROBBINS. Actually, I can go back to where my son was diagnosed, when you talk about childhood illnesses and strep throats and ear infections and rashes. He had much of that from 8 months of age on. And a lot of those bills up until the time he was diagnosed and I went through the divorce and was accepted by medicaid, we probably had put out a few thousand dollars in doctors' bills and medications.

Since I was on medicaid when Robbie was diagnosed, a lot of his medical bills were covered. I had sent to the head medicaid office for a copy of those bills, and it was in excess of $150,000. And that didn't cover everything, I am sure. And that's not the full rate of what the doctors or the hospitals get.

Now, even after Robbie has died, it's been 2½ years, Kevin and I both go for psychological help. Kevin goes an awful lot more than I do. He's got a lot of problems. Like I said in my testimony, that I have received bills for $4,000 and $5,000 just for psychological services alone for Kevin. And I know that's going to continue on for years and years.

Once I get out of school and am out working by myself—and I can't wait for the day—I will be picking up the tab for all these bills. And I don't expect it to be small.

Senator MITCHELL. Thank you, Mrs. Robbins.

Mr. Toomey.

Mr. TOOMEY. OK. I have some of the bills here, and if you take a period of time, here's a bill for $5,308, which is just 14 days. OK. Another one for $3,700, 12 days.

Now, we figured up the cost, like Donna was saying, at $50,000 to $70,000 to $100,000. All right. Now, I worked for a very good company who had very good coverage, Blue Cross-Blue Shield. Very, very excellent coverage. They did very well by me. But what about the individual who doesn't? He is the one who is going to have to pay, like Donna has to pay for the cost because she didn't have it.

OK. Medicaid or whatever, picked up some of it, but it leaves her with bills.

Now, doctors' bills, I didn't even count. I can count one, two, three, four, just five bills out of all of these—and I took the larger ones, there's thousands there—that come to about $25,000. But that isn't all the cost. The hospitalization is fine. That isn't all the cost. You, if your son is sick, do you say, "OK, I got to rush him into the Massachusetts General at times. It's 20 miles away, 15 miles away. Do I have a 1928 car so that maybe I get halfway there and my

wife gets stuck about 3 o'clock in the morning, your car is no good? So these are expenses that you have to do. You had to go out and buy a new car, make sure you get your son there on time.

Every time you went to the hospital, my wife—we had him in the first time 10 weeks straight—she went every morning, I went every night. She pays $3 in the morning. I pay $3 at night. You add that up for 10 weeks, it becomes a lot of money, too.

That is only another part of it. You also got the gas for the transportation. There are agencies. We went to a few of the agencies, and some of them picked up a little bit of the gas. But most of the time it's that, "Oh, your medical bills are covered, so you don't get anything." But when your son is there and he says to you, "I would like a Friendly's hotdog," and you've just spent your last dollar for gas to get him in there, it's pretty tough because you don't have that dollar to go get them because if you didn't have it then, you'd have to put it on your gas bill or your electric bill.

Senator MITCHELL. If I could just ask briefly one more question. How many of you have brought suit in an effort to use the legal system to obtain recourse?

[Show of hands.]

Senator MITCHELL. Four of the six have brought suit.

Could I just ask you in the interest of time—and my time is up; Senator Lautenberg has some questions and I don't want to delay it—but those of you who filed suit, indicate the year in which you brought suit and whether or not the suit is still pending?

Mrs. Anderson.

Mrs. ANDERSON. Yes. May 1982, we brought suit. It is still pending.

Senator MITCHELL. Still pending.

Mrs. Kane.

Mrs. ANDERSON. We are all in the same suit.

Senator MITCHELL. All in the same suit? A single suit was brought in May 1982 and is still pending. You have not reached trial yet?

Mrs. ANDERSON. It's very, very difficult because we're forced to dredge up memories, and it's just so difficult for us. It really is.

Senator MITCHELL. All right. Thank you very much.

Mrs. PINARD. Sir, excuse me, may I mention something quickly? I just wanted to say that many times we are always being asked, "Why don't you sue? Why don't you sue?" Right now, there are unfortunately not enough lawyers available to be able to help us with the issues right now as far as environmental hazards, and that they—we are requested, or rather, we are supposed to come up with the initial moneys for them to do their research, and they are talking about at least $25,000 that they would need to do research. There is no way we could have that kind of money, and it is is why we're kind of stuck.

Senator MITCHELL. Based on your experience, you would conclude that the current legal recourse is simply not available to a person in your situation?

Mrs. ANDERSON. True. We were fortunate, our suit is based on a contingency basis so that we're not forced to come up front with the money.

Senator MITCHELL. Thank you.

I apologize to my colleague.

Senator STAFFORD [presiding]. Thank you very much, Senator Mitchell, and thanks for taking over for me during the vote.

Might I ask you just whom you are suing?

Mrs. ANDERSON. Well, yes. We're suing two companies that we believe are responsible for the contamination of our wells. Based on the—there are two separate plumes, and based on those plumes, those companies, we would say that they were responsible.

Senator STAFFORD. Since that is a matter of a public record due to the lawsuit, do you remind repeating for us who they are?

Mrs. ANDERSON. No. One company is a local tannery, J. J. Riley, and the other is Cryovac, which is owned by W. R. Grace.

Senator MITCHELL. By whom?

Mrs. ANDERSON. W. R. Grace.

Senator STAFFORD. Thank you very much.

Senator Lautenberg.

Senator LAUTENBERG. Thanks, Mr. Chairman.

And my thanks to those of you who testified. Your willingness to revisit the pain and anguish that you have experienced, on behalf of others in the future, who I know you would like to spare from the same thing, is testimony to your courage. There isn't anybody who has a child or has a family who wouldn't be touched by the experiences that you have related to us this morning. And your testimony was eloquent, in addition to the message itself. The presentation of the very personal side of the toxic waste issue is great frankly, a service to this country, and I urge you to keep on fighting. Don't get tired.

And as many times as the tears will flow, this is part of the burden and responsibility that you have decided to assume. I commend you for the courage that you have.

Between this building and the Capitol, where we went to vote, I chanced to meet someone in the Senate who raised the question, "Well, how do these people know that the problem, the disease and sickness to their families, came from their proximity to these sites?"

How do we know? Is it statistical evidence? What is it that we're going to hear from the expert witnesses? I don't know whether they are going to address that particular question. Would any of you like to volunteer?

Mr. TOOMEY. I believe you will find that the Harvard study that is going to be testifying next will give you that answer.

Senator LAUTENBERG. They will corroborate the incidence of unique disease and so forth to your families and the vicinity that you lived in? The Center for Disease Control said that they found no correlation—are you aware of that—between the Woburn wells and the higher disease rate. I have no doubt that they were wrong. But what does that tell you about the reliability of the current level of science? Are any or each of you or all of you familiar with that report?

Mr. TOOMEY. Yes, sir. It's like anything else, that we basically come down to everything comes down to money. You spend $5 for an item, you don't find much about that item. If you spend half a million dollars, you find a lot more. The Disease Control down in Georgia did not spend that much time and money.

Harvard spent, which we are grateful, very, very grateful for, spent one-half to three-quarters of a million dollars to do an extensive study with the help of 315 unpaid volunteers, who we are very grateful to, too. And that is one extensive study that very, very few towns, cities, or even States, can really go through that type of a study.

Senator LAUTENBERG. I wish, Mr. Chairman, since I know that you share the concerns of the most concerned among us, that this message gets through.

I wish that you could testify before the other 96 members, or 95 members, that weren't here. That would do a good deal to further your cause.

I have a friend who has been listening to the exchange here, who said that it's too bad that the people heading industry can't sit across from you face to face. Many people paint industry as evil, but that can not have, in my view, of a significant majority. But there is often a lack of awareness.

I grew up in an industrial community in New Jersey, Paterson, N.J. We have—New Jersey has—a lot of toxic waste sites and a lot of problems and so forth. But again, each one operates in their own orbit, and it's only the grim testimony of life's experience that you have brought here that can make a huge difference. And I for one would like to see if we could somehow or other arrange to have you repeat your experiences again.

I thank you, Mr. Chairman.

Thank you all, very, very much.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

And knowing we have had the electronic media with us this morning, the testimony here may have reached quite a few households across the country. I hope it has.

Let me, for the committee, express our appreciation to all of you for helping us in our efforts to try to help you and more beyond you, I guess, the Nation. What you have said has been very helpful to us. We will have it in mind.

The members who weren't able to be here personally have had senior members of their staffs here in person, so that what you have said will be heard or read by all of the members of this committee as we move on in what we hope, and I expect, will be a substantial increase in the size and extension of the life and functions of Superfund.

So thank you very much indeed.

VOICES. Thank you.

Senator STAFFORD. The final panel this morning will be Dr. Marvin Zellen of the Harvard University School of Public Health, and Dr. David Ozonoff of the Boston University School of Public Health.

Gentlemen, if you would take the witness table. In the years when Senator Randolph chaired this committee and I was his ranking member, he would not have failed to point out if somebody was from the faculty of an institution of higher learning of West Virginia. So I will mention the fact that, to Dr. Ozonoff, I am a graduate of the Boston University School of Law. And last year, I was their commencement speaker.

We welcome you here, and we don't know which order you wish to go in. We defer to your wishes, if you have them. If not, we would ask Dr. Marvin Zellen to go first. If you have statements in writing, we will put them in the record in full.

STATEMENT OF DR. MARVIN ZELLEN, HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH

Dr. ZELLEN. Mr. Chairman, members of the committee, ladies and gentlemen, on behalf of my colleagues and myself, we wish to thank you for the invitation to tell you about the Woburn study.

It is our view that the way the study was conducted could serve as a model for other communities faced with problems similar to Woburn. Although the political process is always an avenue open to concerned citizens, we hope the Woburn health study illustrates how citizens can take positive steps to help resolve issues relating to the evaluation of possibly adverse health effects associated with environmental hazards.

Our data was a random sample of households gathered by over 300 volunteers who were recruited and trained by a Harvard and a FACE team. FACE is the acronym, F-A-C-E, for the citizens group, and it stands for "For a Cleaner Environment."

On the evening of February 8 of this year, we presented the results of our study at an open meeting in the town of Woburn, which was attended by several hundred people. Prior to that day, no one was aware of our study results, except for a briefing which was given the night before to a small committee from the Woburn citizens group.

The reason for not communicating any preliminary or final conclusions in advance is that we wished to maintain a position of complete objectivity. We did not care to be influenced by either environmental or industrial advocates. However, we had agreed with members of FACE that the citizens of Woburn would be the first to know about the results.

In the spring of 1982 we carried out the telephone survey. It was preceded by a year of careful planning, designing the questionnaire, piloting, revising. The assistance of the members of FACE was invaluable. The survey was able to collect information from more than 3,000 households on reproductive events, childhood disorders.

I now will briefly review the major findings of our study.

First, children with leukemia had twice the access to water from the contaminated wells compared with children not having leukemia. The childhood incidence rate for the period 1969 to 1983 in Woburn is approximately three times the national rate.

Perinatal mortality; that is, stillbirths, after 6 months of pregnancy, and infant deaths within 7 days of birth—was higher for pregnant women who had at least 50 percent of their water coming from the contaminated wells. Compared with women having no water from the wells, the relative risk of perinatal death was 4.5. These findings held for the period post-1970.

Senator LAUTENBERG. I am sorry, Mr. Chairman, I wanted to be certain of that.

The 4.5 is what?

Dr. ZELLEN. The relative risk, the probability of having perinatal death for someone who had the majority of their water——

Senator LAUTENBERG. Is that per thousand or——

Dr. ZELLEN. No, it's a ratio of two probabilities.

Senator LAUTENBERG. OK. So it's 4.5 times higher risk, is what you're saying?

Dr. ZELLEN. For women who had this level of water while they're pregnant, the probability of their offspring having perinatal deaths was 4.5 that of a woman who didn't have any water coming from these contaminated wells.

Senator LAUTENBERG. Thank you. Sorry.

Dr. ZELLEN. It's a technical definition.

Senator LAUTENBERG. No, no. I come from a statistical background.

Dr. ZELLEN. OK.

Senator LAUTENBERG. I just wanted to be sure.

Dr. ZELLEN. OK; pregnant women having access to water from these wells had children with a higher rate of birth defects; in particular, the eye-ear birth defects and a class of defects composed of central nervous system, chromosomal, and oral cleft defects; had greater incidence with increased exposure to water from the contaminated wells.

In other words, the more water they had, the greater the incidence of these defects.

Senator STAFFORD. Doctor, I will resist the temptation to break in as much as possible, but when you talk about the contaminants and the possibilities and probabilities, could you tell us what contaminants you are talking about here, or will you cover that later?

Dr. ZELLEN. Well, let me finish this and then I will return.

Senator STAFFORD. All right.

Dr. ZELLEN. I just want to give you sort of the broad picture.

The increased risk of the eye-ear birth defects depended on the amount of available water from the wells and was as high as four to those with the greatest exposure. For the other class of birth defects, the relative risk was increased by a factor of 2.5.

Finally, we observed higher levels of lung and respiratory, kidney and urinary childhood disorders with those children having access to waters from the contaminated wells compared to those who didn't.

Now, this next statement is most important. Since the wells have been closed (1979), the rates of these disorders in the 3-year period 1980, 1981, and 1982, in the regions of Woburn that were formerly serviced by these wells has significantly declined. Furthermore the decline of these rates has reached levels which are comparable to rates in those parts of Woburn which never received water from these wells. (Both for the years when the wells were operating and the period 1980–83).

So essentially, that area which was at high risk has the same rates as has the rest of Woburn.

The aggregate evidence is overwhelming that the availability of water from these contaminated wells is positively associated with adverse health effects. However, it should be pointed out that by no means do our findings prove any cause-and-effect relationship between the contaminants in the wells and adverse health effects.

Our study was an observational study, and such studies by their nature, cannot prove cause-and-effect relations. Our findings are similar in spirit to the initial reports of cigarette smoking and lung cancer.

Also, I should mention that we do not know very much about the history of these wells prior to 1979, whether other contaminants were present, and their concentrations. Nevertheless, since the wells were closed, the observed lowering of the rates of perinatal deaths, eye-ear, central nervous system, chromosomal, oral cleft defects, in the areas formerly served by the wells are consistent with what would be expected if the contaminants in the well water caused these disorders.

Finally, I wish to conclude with pointing out that carrying out a study in the way we did is difficult, time consuming, and certainly not routine. It required a high degree of sophistication in analytical methods. Although our study was mainly carried out with volunteer efforts, it is unreasonable to expect all such studies to be done that way.

If the bill currently being discussed is going to provide funds for carrying out comparable studies, I hope that the studies are not underfunded. An inadequate study can do positive harm.

Finally, I would like to return to the question you raised, Mr. Chairman, about the contaminants in the wells. In May of 1979, the following contaminants and their concentration were found: trichloroethylene, 276 parts per billion; tetrachloroethylene, 21 parts per billion; chloroform, 12 parts per billion. A few months later, additional organic solvents were discovered.

This concludes my testimony. I would like to thank you for the opportunity to present our views.

Senator STAFFORD. Well, we are very grateful to you for helping us.

Now, Dr. Ozonoff, we would be very happy to hear from you.

STATEMENT OF DR. DAVID OZONOFF, BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH

Dr. OZONOFF. Thank you, Mr. Chairman. It is a pleasure to appear here, especially with a chairman who is a graduate of the Boston University School of Law.

I am the chief of the environmental health section of the Boston University School of Law, and I was the principal investigator of the Silresim area health study. Two residents of the Silresim appeared on the previous panel. And I think it feels somewhat peculiar and, I must say, very superfluous to appear after that kind of eloquent testimony. You have seen the human face of that tragedy and heard the human voices of it. And all I can add, really, are the numbers and to tell you that what they said is true, that they in fact were suffering greater rates of adverse health outcomes near the Silresim site.

I will make available to you the executive summary of the report that we wrote and also my written statement which summarizes this. I don't think there is any need to run through the numbers for you.

There are one or two points that I would like to make about it that I think are important in this context.

One of them is—and I think this is also true of the Woburn study—that we saw health effects around the Silresim site at levels of contaminants that we would never expect to see health effects based upon scientific literature as it exists now. And that scientific literature, I think it's important to realize, is based mainly on occupational data and accidental poisonings and suicide attempts with these chemicals. And we have been basing a good deal of our risk assessments on that kind of information, and it turns out that information gathered at the Silresim site—and if the figures that Dr. Zellen just quoted are accurate figures—for the levels of contaminants in those wells, we are now seeing health effects at much lower levels, dramatically lower levels than we would have been led to believe before. And I think that's extremely important with respect to the impact on the health of people in neighborhoods all over this Nation.

The other point that I would like to make has to do with epidemiological studies themselves. Epidemiological studies are very blunt instruments with which to dissect delicate tragedies like this. And in fact, one workable definition of a public health catastrophe that I have is that a public health catastrophe is a health effect so powerful even an epidemiological study can detect it.

In actual fact, epidemiological studies are terribly insensitive, notoriously so, and I think it would be a great mistake ever to require epidemiological evidence of human health effects before compensation were granted. And I make that comment because of the topic of the hearing before us today.

I will make available to you my written statement and the executive summary, and I would certainly be glad to answer any questions that you have.

Senator STAFFORD. Well, thank you very much, Doctor.

Let me ask you this question for your response. What kind of studies do you believe are necessary to prove that in cases such as Woburn the diseases and injuries were more likely to have been caused by toxic chemicals and how much do such studies cost?

Dr. OZONOFF. All right. Well, I am sure Dr. Zelen would like to talk about Woburn. Let me just talk about the cost of these studies. They are extremely clumsy studies to do. They are unrewarding as far as the frustrations involved. And they are extremely expensive.

We interviewed somewhere between 2,000 and 3,000 people with an extensive questionnaire in the space of 6 weeks. That data collection alone—that's only the data collection—of keypunching, coding, and so forth costs $70,000. That's 70 percent of the $100,000 that the study cost. And frequently for not much gain, I have to say, although both Woburn and Silresim are examples of positive studies.

I think many more epidemiological studies have to be done, and we have to find new methods and new tricks to do these kinds of studies. And epidemiology is mainly a sort of a bag of tricks that one uses, and we have to sharpen them for this particular use. But we also have to do a large amount of work in toxicology, laboratory experiments, record reviews, and so on, to establish a consistent

body of information that would allow the kind of cause-effect relationship that Dr. Zelen has talked about to be made.

It is—in my view, epidemiological studies can establish cause-and-effect relationships if they are taken in the context and against the background of a large amount of consistent information. And it is that kind of consistent information that we have to develop. And there has been shockingly little work done in the toxicology and epidemiology of these kinds of community exposures.

I know, in my teaching, I think perhaps the only thing my students learn is how little is known. They are shocked by it. They think that people know a great deal about everything, and when they find out that science doesn't, they are flabbergasted.

Senator STAFFORD. Thank you, Doctor.

Dr. ZELEN. Mr. Stafford, may I comment on your question?

Senator STAFFORD. Certainly.

Dr. ZELEN. Obviously, there are hundreds, perhaps thousands, of toxic waste sites. It's out of the question to do a careful study on every one of them. It's just not feasible. Instead, I think one has to think about an overall plan of how to deal with the situation.

Now, in Woburn we did a study which showed that there was a positive association related to well water which had confirmed contaminants.

Suppose there was another site in the country with similar contaminants. If a careful study was done which also showed adverse health effects, then it would seem proof positive that it would no longer be necessary to carry out a health study for those sites having the same kinds of chemical contaminants. All one would have to do is to establish that the chemical contaminants were present, and one can infer by the nature of, say, two independent studies, that they are associated with adverse health effects.

So what one could do is perhaps orchestrate a national strategy. Given that we have hundreds of such sites—choose a subset of these sites and carry out independent studies. These studies should reflect our best effort. They should not be inadequately funded studies.

On the basis of such a strategy, it might really build up enough scientific evidence to be able to take positive actions for situations which are now in dispute.

Senator STAFFORD. Dr. Zelen, how much did the Harvard study cost, if you could tell us?

Dr. ZELEN. It was an unfunded study—for the most part. However, we did sit down one time and costed it out as if it were completely funded. We included all costs—indirect costs, fringe benefits, et cetera. Our estimate come to about $500,000.

Senator STAFFORD. Thanks very much.

One more question, which I will aim at Dr. Ozonoff, but maybe you both might comment on this one, too, if you would. Frequently, when studies such as you have described fail to find a positive correlation between the exposures and illnesses, they are cited by some as negative proof. That is, they are cited as having proved that there is not, in fact, a disease or injury caused by a toxic chemical.

Is that a fair reading of the studies that you gentlemen have testified to?

Dr. OZONOFF. Well, since you aimed it at me, let me tell you that you hit the target right in the bull's-eye. I must say that nothing makes me more furious than to hear that happen, and mainly for the reason that I suggested before: that epidemiological studies are very insensitive and crude measures. It's sort of like we are like people who go into a huge, dark warehouse full of dangerous objects, that is completely dark except for a tiny little miner's light on top of our head. And we look around and we say, "We don't see anything," and walk out again.

The power of our methods to see things is so small. Even in extremely carefully done, well-done cancer studies, I don't think it's appreciated, for example, that the smallest increase in the cancer rate over background that has ever been detected in an epidemiological study is 30 percent. And that would be totally unacceptable, I think, to most communities if you said that their cancer rate was 10 percent over background. They would be upset. And yet, you would never pick it up with an epidemiological study. That's why I find a public health catastrophe is something that's even so strong that you can see it with an epidemiological study. By the time you see it with an epidemiological study, you've got a big problem on your hands.

Senator STAFFORD. Dr. Zelen.

Dr. ZELEN. If I may address that question in the capacity of a professor of biostatistics, the level of analytical expertise required is really quite sophisticated. Often much more sophisticated than is brought to bear on such studies. The question one might ask is just a question of logic. A study has been completed and it's negative. What were the chances of finding out that there was a positive relationship if, in truth, a positive relationship exists?

We have a technical term dealing with this concept and which is called sensitivity. Most of these studies have low sensitivity to detect adverse events with low frequency. For example, a neonatal death—death in the first 7 days of birth—happens in 1 out of 200 births. If one is only going to interview 50 mothers, unless that rate has changed by a very large factor, one is not going to see anything.

So the best way to find no relationships is to do an inadequate study.

Senator STAFFORD. Well, thank you both. I think your testimony has been impressive as well as very helpful to us. We know the time and trouble you have gone to to be here, and for the committee I want to tell you we appreciate it.

It may be some of my colleagues who could not be with us this morning will have a question or two in writing. Would it be agreeable if they sent them and asked for your written response?

Dr. OZONOFF. Of course.

Senator STAFFORD. All right. Well, you have helped us a great deal, and we really are appreciative of it. Thank you.

The committee stands adjourned.

[Whereupon, at 1:01 p.m., the committee was adjourned.]

[Dr. Ozonoff's written statement, with attachment, and a response from Dr. Ozonoff and Dr. Zellen to an additional question follows:]

David Ozonoff, MD, MPH
Chief, Environmental Health Section
Boston University School of Public Health

My name is David Ozonoff. I am the Chief of the Environmental Health Section of the Boston University School of Public Health and President of the Massachusetts Public Health Association. My main research interests are in the environmental epidemiology of toxic exposures and I was the principal investigator of the health study of the Silresim dump site in Lowell, Massachusetts. You have already seen the human faces of that tragedy and heard the human voices. It would seem almost superfluous at this point to have a scientist come and confirm what we all know to be true: that people's health was harmed in Lowell; that the efficiency, productivity, and quality of life of the neighborhood was impaired; and that no mechanism existed to deal expeditiously with their problem or to compensate them for their suffering. This notwithstanding, I can confirm for you that a health study of the Silresim neighborhood did in fact show that the people who lived closest to the site experienced significantly worse health than those farther away or not near the site.

The study that we undertook in Lowell was completed in the early part of 1983. This was two years after the barrels had been removed from the site and some six or seven years after the first serious complaints. This suggests that the effects that we saw were the residues of what may have been greater health effects that had occurred years earlier. To describe the study briefly, I and my colleagues at the Boston University School of Public Health together with a team from the Center for Survey Research at the University of Massachusetts/Boston surveyed a random sample of residents in the vicinity of the

Silresim site and a second sample of Lowell residents at a distance from the site. By means of telephone and in-person interviews, residents in these two areas answered questions about their health and the health of their children, and provided additional background information on health-related characteristics such as smoking habits and occupational exposures. We succeeded in obtaining interviews from more than 80% of the eligible adults in the random sample, which provided information on just under 2,000 adults and 1,100 children in the two areas. I would like to note that such extensive data collection is time consuming and expensive, with interviewing, coding and key-punching alone accounting for $70,000 of the $100,000 cost of this study.

We did not detect in this study any unusual degree of reproductive problems or of cancer compared with residents of our comparison area. While this lack of reproductive hazard is reassuring, it should be emphasized that the sample sizes involved may not have been sufficiently large to detect small but real differences. In addition, since cancer involves a considerable lag time subsequent to exposure to carcinogenic agents, on the order of fifteen to thirty years, it would have been difficult to attribute any increase in cancer occurrence to the waste site in any event.

However, the study did find a statistically significant increase in the reporting of a number of less severe but still troublesome complaints in the neighborhood of the site. These included wheezing and tightness in the chest, cough, chest discomfort, shortness of breath and persistent colds. Residents

also complained more often of unusual fatigue and tiredness, bowel dysfunction, and headaches. Of particular importance was the finding that the frequency of respiratory symptoms, headaches and fatigue was most elevated close to the site itself, becoming less frequent as one moved away. Similarly, parents reported that children who lived near the waste site suffered more sore throats and episodes of bronchitis than those in the comparison area.

Our results probably understate the degree of health impact in this neighborhood. Only current residents were part of the study. Information from those who had moved away because of illness was lost. Moreover, the survey was completed long after the worst exposures were abated. Despite this, health of residents near the site appeared significantly worse than those who were otherwise similar but who did not live in the neighborhood of the site.

The health effects at Silresim seem to appear at dramatically lower exposure levels than we would have been led to expect from the existing scientific literature. That literature is almost entirely derived from animal experimentation or occupational exposures. The Lowell findings, together with other evidence, suggests that the traditional occupational evidence might be inappropriate for use in a non-occupational setting, especially when complex mixtures rather than single agents are involved and exposure occurs over prolonged periods.

It is important to note that very few detailed epidemiological studies of waste sites have been carried out. The Lowell and

the Woburn studies are two exceptions. I believe that with passage of time we will accumulate more and more documentation that health impacts are occurring in our nation's neighborhoods. Despite this optimism, we must also recognize that epidemiological methods are notoriously insensitive to detect health effects, except when they are extremely powerful. In fact, epidemiology has turned out to be a remarkably blunt instrument to dissect these problems. One workable definition of a public health catastrophe would be a health effect so powerful that even an epidemiological study could detect it. It would be a gross injustice to require epidemiological evidence from victims before compensation takes place. If only a handful of individuals in a neighborhood contracted cancer from exposure to a hazardous waste site, it would be absolutely impossible to demonstrate this with an epidemiological study, even though they would have every right to have their damages redressed. A more rational scheme would require a showing that exposure occurred, together with scientific evidence which connected such exposure to a particular health damage, and plausible evidence that this damage has occurred to that individual.

Given what we found in the Silresim area health study, I would expect that much compensation would be of a low order of magnitude, involving out-of-pocket medical expenses amounting from a few hundred to perhaps at most a few thousand dollars. In other instances the damages may be larger, as when catastrophic illness is involved. In those cases, I do not believe that an administrative scheme would suffice to compensate an individual

for pain and suffering and the tort system would be the preferred route of compensation. I also believe that it is important to build into the compensation scheme the element of prevention, as suggested in the draft position of the American Public Health Association.

The problem of victim compensation is complicated, to be sure. It is made the more so because of the scientific uncertainties involved. We must not allow those uncertainties to continue to work so heavily against victims and their families.

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SILRESIM AREA HEALTH STUDY

REPORT OF FINDINGS

November 22, 1983

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Executive Summary

From 1971 to 1977 a large volume of chemical wastes was handled, often improperly, on a five acre site less than 400 feet from a densely populated residential neighborhood in the Ayer City district of South Central Lowell. Many of the chemicals posed a potential threat to health and the environment. In 1978 the Department of Environmental Quality Engineering (DEQE) secured the site and by September 1981 had all surface containers and their contents removed. The soil on the site remained contaminated, however, and residents continued to have concerns about past damages to their health and the possibility of further health risk from the chemical residues left behind.

On January 5, 1983 the Boston University School of Public Health contracted with the DEQE's Division of Water Pollution Control to study health effects in the vicinity of the site. Technical oversight was provided by the State's Department of Public Health, Division of Environmental Health Assessment.

From February 22, 1983 to April 20, 1983, the School and its subcontractor, the Center for Survey Research of the University of Massachusetts-Boston, surveyed a random sample of residents in the vicinity of the site ("the target area") and a second sample of Lowell residents at a distance from the site ("the control area"). By means of telephone and in-person interviews, residents in these two areas answered questions about their health and the health of their children, and provided additional background information on health-related characteristics such as smoking habits and occupational exposures. More than 80% of the 2463 eligible adults participated in the survey, providing information on just under 2000 adults and 1100 children in the two areas. In addition, we investigated differences in the patterns of causes of death between the target and control neighborhoods by examining death certificates of all Lowell residents who died between January 1, 1970 and December 31, 1981.

The health effects of most concern to neighborhood residents were adverse reproductive outcomes, especially stillbirths, miscarriages and birth defects, and serious diseases of adult life and childhood, particularly cancer and leukemias. The results showed that residents of the target neighborhood did not experience an unusual degree of reproductive problems or of cancer compared with residents of the control area. In addition, the mortality patterns did not differ in the two areas.

Since cancer involves a considerable lag time subsequent to exposure to carcinogenic agents (15-30 years) it would have been difficult to attribute any increase in cancer occurrence to the site, in any event. The lack of any demonstrable reproductive hazard is reassuring, as is the normal appearing mortality pattern. It should be emphasized that the sample sizes involved may not have been sufficiently large to detect small but real differences. The study team concludes that on currently available evidence there is no marked increase in reproductive hazard, cancer risk or mortality in the target area.

In addition to these major health effects, less serious but still troublesome health conditions were investigated. Adult residents of the target area were compared to those in the control area for self-reported symptoms occurring within the six months prior to the interview, and for disease conditions about which they were told by their doctor or other health care provider. Target area residents complained of respiratory symptoms more frequently than control area residents, including wheezing and tightness in the chest, cough lasting for more

than two weeks, persistent colds, and shortness of breath. Also more frequent in the Silresim area were constitutional complaints such as unusual fatigue and tiredness, bowel dysfunction and headaches. In addition, Silresim residents were told by their doctors that they had heart problems more often than the control population. The frequency of respiratory symptoms, headaches and fatigue was most elevated close to the site itself. This was true both for those residents who believed the air was unhealthy, and those who did not, indicating that bias was not the source of this effect. The influence of smoking, occupational exposures, age and a number of socio-economic factors was taken into account in these analyses.

Similarly, acute and chronic diseases of childhood were investigated through information supplied by the most knowledgeable adult of the household, usually the mother. Questions concerned childhood illnesses and conditions and were not the same as adult questions. There were significant differences between target and control areas in the frequency of in sore throats for both pre-school and school age children. For chronic conditions, a history of frequent bronchitis was more common in the Silresim area compared to control children.

Sources for the differences in the frequency of symptoms other than the Silresim site were considered. Differences in age, occupation, smoking habits and socio-economic status were taken into account in the analyses, and hence do not explain the observed differences in symptom prevalence. The tendency for target-area residents to have better recall of their symptoms than their control-area counterparts was considered in some detail. As a result of separate analyses that looked at those residents least likely to exhibit such recall bias, it was concluded that such an effect could not completely account for the differences, although some influence was evident.

On the other hand, a number of factors tended to reduce any real differences that might have existed as a result of the presence of the site. Only current residents were part of the study. Information from those who had moved away because of illness was lost. Furthermore, in most comparisons the entire target area was compared to the control, even though it is clear that there was differential exposure in the target area, with the more exposed "diluted" by the less exposed. Finally, the assumption that the control area was itself free of environmental hazard may not be true. If false, it would tend to reduce the differences found. For all of these factors, then, the tendency would be to mask any real effects.

The question thus remains whether exposure to chemicals from the waste site is the cause for this apparent increase in health problems among adults and children. While chemical emissions from the site are detectable, they are at an extremely low level. Exposures by routes other than air are even less likely. The existing literature on the chemicals present at the site suggests that symptoms would not occur until exposures were much higher than present at the site during the survey period. Thus, there seems to be only three possibilities to explain the results of the study:

(1) There may be an as yet undiscovered bias that distorts the data in such a fashion as to make an association with the site appear where none exists. Care has been taken in this study to eliminate or evaluate such effects, but it is impossible to be completely sure that none are operating.

(2) The air monitoring information may be unrepresentative. This seems unlikely. Monitoring was performed at the site and its environs on several occasions, using different methods. The results were all consistent.

(3) Health effects may appear at dramatically lower levels in a community population than in one occupationally exposed. Virtually all our current knowledge of health effects is derived from occupational studies. These might be inappropriate for use in a community setting, especially when complex mixtures rather than single agents are involved.

In summary, investigation of the Silresim area neighborhood did not reveal any unusual patterns of mortality, increased cancer risk, or birth defects or other reproductive hazards. Much less severe but still troublesome health effects did seem to be more common in the vicinity of the site. However, the observed effects seem to be out of proportion to the apparent exposure. Thus it is not possible at this time to state conclusively that the site is the cause of the adverse health effects.

QUESTION FOR DR. OZONOFF

Has the Lowell Study been submitted for peer review? If so, please identify those scientists to whom it has been submitted and provide their comments for the record. If not, please give an explanation of your failure to seek peer review for the study.

BOSTON UNIVERSITY SCHOOL OF PUBLIC HEALTH,
SCHOOL OF MEDICINE,
Boston, Mass., April 20, 1984.

Senator ALAN K. SIMPSON,
Dirksen Senate Office Building,
Washington, D.C.

DEAR SENATOR SIMPSON: In response to your letter to me regarding my testimony before the Senate Committee on Environment and Public Works, please be advised that our study concerning the health of residents in the neighborhood of the Silresim hazardous waste site in Lowell, Massachusetts, underwent peer review on two separate occasions. The first was during the competitive bids process, when our detailed study design was examined by a committee of nine health professionals, and again in the six weeks prior to its public release. The Chair of the Review Committee was Dr. Sharon Rosen, Director of the Division of Health Statistics and Research of the Massachusetts Department of Public Health. I am sure she would be glad to share her comments with you if you ask.

The report is now being prepared for publication, where it will undergo peer review yet one more time. I hope this answers your questions.

Sincerely yours,

DAVID OZONOFF, MD, MPH,
Chief, Environmental Health Section,
Principal Investigator, Silresim Area Health Study.

QUESTION FOR DR. ZELLEN

Has the Woburn Study been submitted for peer review? If so, please identify those scientists to whom it has been submitted and provide their comments for the record. If not, please give an explanation of your failure to seek peer review for the study.

HARVARD UNIVERSITY,
SCHOOL OF PUBLIC HEALTH,
DEPARTMENT OF BIOSTATISTICS,
Boston, Mass., April 23, 1984.

Mr. CURTIS MOORE,
U.S. Senate Committee on Environment and Public Works, U.S. Senate, Washington, D.C.
Washington, D.C.

DEAR MR. MOORE: This letter is in response to the written question which you asked me in connection with the study which was carried out in Woburn, Massachusetts. The paper has been submitted to a technical journal for publication. Normally, referees are anonymous. However, before submitting our paper we had consulted with our colleagues from the Harvard School of Public Health: Dr. Louis and Ware (Biostatistics), Dr. Munson (Epidemiology), and Dr. Cairns (Cancer Biology). These individuals read preliminary drafts of our final paper and supplied comments.

If you have further questions, please feel free to contact me.

Sincerely,

MARVIN ZELEN.

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

WEDNESDAY, APRIL 25, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 10:15 a.m., in room SD-406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Chafee, Simpson, Humphrey, Randolph, Bentsen, Burdick, Lautenberg, Moynihan, Mitchell, and Baucus.

OPENDING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Good morning. The Committee on Environment and Public Works will please come to order.

I apologize to our guests for the fact that the room is not a little bigger, but it is the only room we have, and we have difficulty trying to get the only larger one in this building which is assigned for other purposes today.

This is the second committee hearing on the proposed extension of the Superfund law. A third is scheduled for May 16. Another set of hearings, which I hope will be the last before markups are scheduled, will be held on May 22, 23, and 24.

This morning we will hear from representatives of EPA and four States: New York, New Jersey, Ohio, and California. We hope to learn whether or not the law has been functioning well and, if not, what improvements can be made. I would like to say again that it is our desire and determination to meet the Superfund extension this year. If we cannot complete the extension during 1984, it will be March or April before the process could be renewed in 1985, leaving us precious little time to complete the lengthy and complicated legislative process.

So that we can spend our remaining time attempting to achieve that goal rather than talking about it, I would now ask other members if they have statements. If they do, we will listen to them, if not, we will call on our first witness, Lee Thomas, well known to this committee. He is the Assistant Administrator of the Environ-

mental Protection Agency for the Office of Solid Waste and Emergency Response.

As a footnote, I will just add that, as you can see, we are having quite extensive hearings in connection with this project of extending the program on Superfund. We are not going to try to get around anybody or blindside anybody. We want to do this in a careful and methodical way.

Senator Randolph, do you have an opening statement?

OPENING STATEMENT OF HON. JENNINGS RANDOLPH, U.S. SENATOR FROM THE STATE OF WEST VIRGINIA

Senator RANDOLPH. Mr. Chairman, I commend you for your continued active leadership in not only the hearing process, but you have expressed the desire of this committee to report to the Senate legislation that hopefully, and I believe can be, passed by the Senate before the end of the year. I will work very closely with you, as I am sure all members will, to bring this into being.

Senator STAFFORD. Thank you very much, Senator Randolph.

Senator Chafee.

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Mr. Chairman, first I want to join you in welcoming Mr. Thomas, Mr. Hedeman, and others. We have known these gentlemen for many years, and they have certainly done a good job for the country.

Mr. Chairman, I want to commend you for taking the lead on this important issue of the Superfund reauthorization and for pressing forward this year. Some, and I expect we will hear more on that this morning, have expressed a desire to postpone reauthorization to next year when the fund is due to expire. We will have no choice but to pass something, anything, if only a simple extension of the law. The way you are handling it I think is right. We are having these extensive hearings, and I believe we should act and act now, as you have indicated.

We know the law is seriously flawed in several important respects. It was a new venture when we adopted it in 1980. Many members of this committee and of the full Senate thought the fund was not going to be large enough to address the problem, and I think that has proven to be accurate. Other problems have arisen in the area of Federal/State relations, development and revision of the national priorities list, what to do about Federal facilities, the petroleum exemption, and underground storage tanks.

Another troublesome issue is how this law relates to RCRA and vice versa. Mr. Chairman, as you know, we are going to proceed to floor action on RCRA very shortly, perhaps at the end of next week. Several members have approached us about the possibility of using RCRA as a vehicle for amendments to Superfund. Mr. Chairman, I would appreciate some direction from this committee on how to proceed. My view is that floor amendments to Superfund should be attached to a Superfund bill, not to RCRA. In light of the fact that we are moving forward on Superfund, I have been advising members who want riders to RCRA that if those amendments

would create any unanticipated drain in the fund or would raise serious policy issues relating to Superfund, that those amendments to RCRA would not be acceptable on the floor. There are some very modest things that don't affect or cause an unanticipated drain on the fund, that don't raise serious policy issues, and those I am prepared to accept.

That is the philosophy I have been using, and if there is any objection to that from this committee, I would like to hear it.

Finally, what I am really anxious to hear this morning from the witnesses is in the course of reviewing Superfund and RCRA, it seems to me we have consistently avoided one fundamental issue. That is, what are we doing to prevent the creation of new Superfund sites? As we clean up the old sites and reduce our reliance on existing land disposal facilities, how are we going to site new facilities that are more safe than what we have now?

Mr. Thomas, as you know, you and I have discussed this. It is my view that we ought to levy a mandatory requirement on the States that either each State have a licensed, safe disposal site or have access to a safe disposal site through interstate cooperation of some form. I think to pour out this money in cleaning up these sites without having a safe alternative of some nature, be it with new technology or be it the existing technology, we are opening the door to more sites in the future. I would be glad to have your reaction, or that of Mr. Hedeman or the panel today on that. I hope we can develop legislation that will coincide with the enactment of a Superfund legislation bill that deals with new siting in some fashion.

Thank you, Mr. Chairman. I know you have heard me sing that song before, but I am looking for some guidance from the administration.

Senator STAFFORD. I would say to my good friend, Senator Chafee, we all know how important a role he has played in matters affecting RCRA. It would be the chairman's hope, and I hope that of this committee, that amendments with respect to the Superfund not be offered to RCRA. We would like to get that passed and completed and sent to the President and, to quote a sometimes unfortunate phrase, let Superfund be Superfund.

Furthermore, we don't want to bring any surprises to the floor of the Senate which deal with Superfund. We want to make sure that everybody, those who approve of what we are doing, those who might oppose us, know exactly what we are going to do with Superfund when it comes to the Senate so that nobody is taken on a blindside.

Senator Lautenberg, do you have an opening statement?

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you, Mr. Chairman. Your commitment to move with a Superfund bill this year is so important. All of our States want to move ahead to clean up hazardous waste dumpsites. In New Jersey, we have the dubious distinction of having more sites on the Superfund list than any other State. We have the most dangerous site in the Nation in our State, the Lipari

landfill. which is in an area where the public depends upon ground water for daily use and fears that its drinking water supplies are being contaminated.

Senator RANDOLPH. I wouldn't want to interrupt, but where is the location of that?

Senator LAUTENBERG. The Lipari site is toward the south-central part of the State.

Seantor Randolph. I see. It is not related to New York City in any way.

Senator LAUTENBERG. No, this is some distance from New York City.

Lipari is 1 of 85 sites awaiting action. Virtually every resident of New Jersey has a family member or friend or a colleague potentially affected by the hazards of these abandoned waste dumps who fear for themselves and obviously for their children. It was recently disclosed that my own home is in an area where the soil has been contaminated with radon, only two blocks away, a discovery that I now share with countless of my constituents.

If we do not move a Superfund bill this year to renew and enlarge the fund, I know what will happen in New Jersey. My Governor has told me and we will receive testimony to this effect today. Cleanup programs that are ready to go, and ready to move into the actual cleanup phase, will be unable to proceed, come October 1. We will have projects ready to go but no funds to clean them up and no flexibility for the State to use its own funds to clean up without suffering a penalty.

Progress has been made at EPA over that last year and funds are being obligated. Work plans are being developed. Partisan politics is no longer the critical factor when it comes to public and environmental health decisions. However, I must say that I find it disconcerting that the administration will not support congressional action this year, and that it wants to wait. We have difficult decisions before us; how big a fund, who pays, what kind of tax, how should the costs be shared, what are the realistic cleanup goals, and how rapidly can we move.

I would like to see the administration working with us to address these questions rather than resisting the effort, and I would like to see the administration contributing to the analysis rather than holding back. I know I share that view with all of my colleagues here, certainly the majority of my colleagues.

Mr. Chairman, I salute your resolve in charting a responsible course of action. I am pleased to work with you and the committee to get this job done.

Thank you.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

Senator Simpson.

OPENING STATEMENT OF HON. ALAN K. SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Senator SIMPSON. Mr. Chairman, I just want to compliment you for the way in which you have tackled the really tough issues and for pushing these major environmental matters through this committee. It couldn't happen without your effort. You have made us

press on and report these controversial and complex bills like clean water, solid waste disposal, clean air act amendments. Those are certainly accomplishments and attributed largely to you. Certainly, with what we see happening in the House on those issues, it is exemplary what you have done.

Now, we tackle another controversial one, and I don't want to delay, but I do hope we stay realistic. I never put Superfund on a partisan basis. I don't think any of us here want to do that. I have been involved in it from the beginning, and you remember some rather ghastly sessions that we had on this when I was first here in 1979.

Senator STAFFORD. If the Senator will yield, I can remember his taking his coat off for one lengthy session.

Senator SIMPSON. I do recall that. I was heated. We won't go into to how I felt at that time, but from that came a good piece of legislation. It may not have dealt with all that was intended to be dealt with with such as the concept of a national compensation system, which I still have trouble with, or a Federal toxic tort, which I have even more trouble with and never have indicated otherwise. The failure to deal with the things in the real world, like mining wastes, some of those things that we deal with in RCRA, and solid waste disposal, but, in any event, there are lots of obstacles and emotion on these issues. I think it is good to begin to lay a very solid foundation here.

We must recall what we contemplated in section 301(a) of Superfund. We directed the EPA to complete a comprehensive report on the implementation of Superfund no later than December 1984, and provided that the program would not expire until December 30, 1985. Therefore, I think obviously we are not going to get anything done without the support and assistance and advice of EPA and I don't want to hurry them in advance of their statutory deadline.

With those realities in mind, I think that we need to work through it, I will try to do that and try to help. I promise you that. Recall what has just happened in the House where you had a polarization over there where the chairman of the subcommittee proposed 122-page Superfund bill and urged it swiftly through the subcommittee and it was rejected. I hope we don't get into that kind of thing and I hope we can avoid that. Knowing you, we will.

I think EPA's active assistance is very important, and the reports due later this year are very important. I think it is a spendid job that Lee Thomas and Jim Barnes have been doing in the last year that encourages me in the belief that we will get something done. I look forward to the testimony.

Seantor STAFFORD. Thank you very much, Senator Simpson.

Senator Mitchell.

OPENING STATEMENT OF HON. GEORGE J. MITCHELL, U.S. SENATOR FROM THE STATE OF MAINE

Senator MITCHELL. Thank you, Mr. Chairman.

Along with the other members of the committee, I look forward to the continuation of these hearings on actions taken in cleaning up hazardous waste sites across the country. It is my hope that

these hearings will form the basis for legislation to reauthorize the Superfund law.

Two weeks ago, in this room, we heard testimony from individuals whose family members were exposed to hazardous contaminants and who suffered injury and death. These people have no recourse through the Superfund now. I believe that one issue before us is the question of personal injury and victim compensation. Should individuals, human beings, who are injured be entitled to compensation out of the fund for their medical and other expenses?

The hearing today has a different focus, and that is, has the law which was enacted to provide for the cleanup of hazardous waste sites actually accomplished that purpose? The unfortunate history of the Superfund program is well known to all of us. The implementation of the law has barely begun nearly 4 years after its enactment when only a handful of sites have actually been cleaned up. Cleanup work has begun at only a small fraction of the total number of known sites. It is now clear to all that the sum authorized for the fund in 1980 will be woefully inadequate to the task.

As the President said in his State of the Union Address, Superfund is not a partisan issue. We must clean up these sites without additional delay.

I look forward to working with Mr. Thomas and the other witnesses here today representing the administration and the States to make this law work and to extend it. Mr. Chairman, I might comment, if I could, on the statement made by Senator Chafee regarding possible Superfund amendments to the RCRA act, something with which I have been working with Senator Chafee very closely.

As Senator Chafee knows, Senators Lautenberg and Bradley proposed two amendments which I understand meet the test that he has set forth, one dealing with State credits for State money and the other with the statute of limitations. They would appear, in my judgment, to fall within the criteria that Senator Chafee has set forth on not making major policy changes or depleting the fund. I assume those are acceptable and, if they are, I certainly am in wholehearted agreement with the standards that the Senator has suggested.

Senator CHAFEE. Yes, the Senator is correct. We discussed this with your staff before we made any decision, but we are going to have to stand in unison because this is but the tip of the iceberg. A lot of people are going to want to load up RCRA with Superfund amendments. I just don't think we can get into those.

Senator MITCHELL. I agree. These are particularly time sensitive and meet the criteria which you have suggested and with which I agree. I share your view on that.

That is all I have, Mr. Chairman. I thank you.

Senator STAFFORD. Thank you very much, Senator Mitchell.

Senator Humphrey.

OPENING STATEMENT OF HON. GORDON J. HUMPHREY, U.S. SENATOR FROM THE STATE OF NEW HAMPSHIRE

Senator HUMPHREY. Mr. Chairman, we won't ever get reauthorized if we keep talking, so I will submit my statement in writing.

[Senator Humphrey's statement follows:]

SENATOR HUMPHREY

OPENING STATEMENT ON SUPERFUND REAUTHORIZATION HEARINGS

APRIL 25, 1984

MR. CHAIRMAN, TODAY MARKS THE SECOND IN A SERIES OF HEARINGS THAT I BELIEVE SHOULD PROVE AN IMPORTANT AND PRODUCTIVE STEP TOWARD REAUTHORIZING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA). I WISH TO COMMEND YOU, MR. CHAIRMAN, FOR YOUR EFFORTS TO MOVE FORWARD WITH A REAUTHORIZATION BILL THIS YEAR, AND TO STATE THAT I FULLY AGREE ON THE NEED TO MAKE IMPROVEMENTS IN THE SUPERFUND PROGRAM IN ORDER TO EXPEDITE THE CLEANUP OF HAZARDOUS WASTE SITES AROUND THE COUNTRY.

MY OWN STATE OF NEW HAMPSHIRE SEEMS TO HAVE MORE THAN ITS SHARE OF HAZARDOUS WASTE SITES, AND AS A RESULT, WE HAVE BECOME INTIMATELY FAMILIAR WITH THE SUPERFUND PROGRAM. WHILE WE HAVE SEEN PROGRESS, IT HAS OFTEN COME AT A DESPERATELY SLOW PACE. OVER TIME, EPA HAS BECOME EVER MORE RESPONSIVE TO OUR NEEDS, BUT WE STILL EXPERIENCE MANY FRUSTRATIONS WITH THE SUPERFUND PROGRAM.

DURING THE COURSE OF THESE HEARINGS, THERE ARE A NUMBER OF ISSUES WHICH THE COMMITTEE SHOULD CAREFULLY CONSIDER. FIRST AND FOREMOST, WE MUST ASSURE AN ADEQUATE LEVEL OF FUNDING. SECOND, WE MUST SEARCH FOR WAYS TO EXPEDITE THE ACTUAL STUDY AND CLEANUP PROCESS AT INDIVIDUAL SITES. THIRD, HEALTH CONCERNS RAISED BY HAZARDOUS WASTE SITES MUST RECEIVE GREATER ATTENTION. IN ADDITION, WE SHOULD GIVE MORE THOROUGH CONSIDERATION TO THE

APPROPRIATE STATE AND MUNICIPAL SHARE FOR RESPONSES. WHILE THESE ARE NOT THE ONLY ISSUES WHICH HAVE ARISEN IN NEW HAMPSHIRE AND ELSEWHERE, THEY ARE SOME OF THE MOST IMPORTANT.

WHEN CONGRESS PASSED THE SUPERFUND LAW IN 1980, I BELIEVE IT FAIR TO SAY THAT WE KNEW WE HAD A PROBLEM, BUT WE REALLY HAD LITTLE APPRECIATION FOR ITS IMMENSITY. WITH THE BENEFIT OF SOME FOUR YEARS OF EXPERIENCE, IT IS NOW CLEAR THAT THE PROBLEM IS OF TREMENDOUS PROPORTIONS, AND THAT IT WILL REQUIRE MORE TIME AND A GREAT DEAL MORE MONEY TO CLEAN UP THE MESS THAT HAS BEEN MADE. I AM CONVINCED THAT CONGRESS SHOULD ENACT A STRENGTHENED SUPERFUND PROGRAM, ARMED WITH SUFFICIENT RESOURCES TO GET THE JOB DONE. PROTECTION OF OUR ENVIRONMENT AND PUBLIC HEALTH DEMANDS NOTHING LESS.

Senator STAFFORD. A true New Englander, I might say. Thank you, Senator.

Senator Bentsen.

Senator BENTSEN. Mr. Chairman, my colleagues have been very articulate, and I will rest my case with them. Now, I would like to get the substantive comments of Mr. Thomas.

Senator STAFFORD. Thank you very much, Senator. You sound like a southern New Englander.

Mr. Thomas, we are very glad you are here with your colleagues from EPA. Although they are well known to us, for the record, you might name your colleagues who are with you and we would be glad to hear your statement now.

STATEMENT OF HON. LEE M. THOMAS, ASSISTANT ADMINISTRATOR FOR SOLID WASTE AND EMERGENCY RESPONSE, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY JAMES BARNES, GENERAL COUNSEL; WILLIAM HEDEMAN, DIRECTOR, OFFICE OF EMERGENCY REMEDIAL RESPONSE; AND EUGENE LUCERO, DIRECTOR, OFFICE OF WASTE PROGRAM ENFORCEMENT

Mr. THOMAS. Thank you, Senator. We are pleased to be here today. With me I have Jim Barnes, on my left, who is the Agency's general counsel. On my right is Bill Hedeman, who is Director of my Superfund Program Office, and next to him is Gene Lucero, who is Director of my Superfund Enforcement Office.

We do appreciate the opportunity to be here today in what we consider most important hearings to review the status of the Superfund Program and begin the discussion of issues associated with reauthorization. I certainly agree with the members of the committee that this is a very important process. It is a part of the process that we in the administration certainly are committed to working with you on and see that there is a full and complete dialog on the

issues associated with Superfund in the context of the overall reauthorization process.

Superfund clearly is one of the major, if not the major, priority within EPA these days. I talked with this committee about Superfund almost a year ago, the status at that point in time when I was new to the Agency. There have been a lot of things that have happened during that year, and I would like to take this as an opportunity to talk over those things with you. I have a prepared statement, and I would ask if you would accept that for the record.

Senator STAFFORD. Without objection, we will place that in the record in full.

Mr. THOMAS. Thank you, sir. I thought I would just go forward and talk about the status of the program, where we are, what we have been doing the last year, where I think we are going, the major issues associated with reauthorization, where we are in the administration in trying to come to grips with those issues, the timeframes within which I think we will have answers to some of those things, and hopefully how we can deal with this committee and the Congress in your most important efforts to reauthorize that program.

Clearly, the administration and the President are totally committed to reauthorization of Superfund. As he stated in his State of the Union Address, he asked Bill Ruckelshaus to pull together for the administration the overall position and substance associated with reauthorization.

That is a process that we have begun and is well underway and one that I think we can have very productive dialog with this committee and this committee's staff over the next number of months as you continue your deliberations.

Let me get into the status of the program. I am going to stand up and use a couple of charts to demonstrate.

Often, I think one of the best kept secrets in this town is the fact that there is much progress on the Superfund. There is a lot of activity, and I want to talk to you some about that activity. I think both the panel you have here today, the Federal program managers, and the panel behind us which are the State program managers, have a good bit to be proud of. We have problems in this program. We have problems as far as the scope and the magnitude of the problem is concerned, but I think we have something to be proud of in that we are making progress in trying to come to grips with this.

The first big responsibility we have under Superfund is to define what is the problem of uncontrolled hazardous waste sites. That is a process that you asked us to identify the full inventory, of potential hazardous waste sites, and assess that inventory in terms of what actions needed to be taken. That is our preliminary assessment and site inspection process. To date, we have identified about 18,000 potential sites in this country. Most of them are self-reported through a reporting process Federal Register notice, of a continuing reporting process of potential sites. That is nearly 18,000. We have projected that that might grow as high as 22,000 or 23,000 potential sites that need to be investigated.

Senator STAFFORD. Does that include all States.

Mr. THOMAS. That includes all States, potential sites in all States.

The actual assessment process that is underway has been one that has been conducted by EPA and by the States, a lot of it by the States. As a matter of fact, we have assessed over 8,000 of those sites to date. The majority of those sites have fallen out as sites that do not require any kind of further investigation, clearly not a hazardous waste site, or for double reporting; that is, a site reported from one place and also another place. Of the sites that we have assessed, the 8,000, we have actually been out over 2,000 for a full field investigation; that is, the site has been identified as a site which requires investigation to determine the extent of the problem at that site.

That is done with testing; lab analysis of results is done to determine the extent of the problem at that site from hazardous waste. Of those over 2,000 we have assessed, we have identified 546 for our national priority list.

Senator STAFFORD. Mr. Thomas, let me just, if I might interrupt, to make sure I understand. You say 8,000 sites have been assessed of the 16,000 that have been identified. Is that right?

Mr. THOMAS. Nearly 18,000 potential sites have been identified. We have assessed 8,000. Of those 8,000, a determination was made that over 2,000 needed a site investigation.

Senator STAFFORD. Then, 6,000 have been found not to be dangerous.

Mr. THOMAS. That is correct. That is our through preliminary assessment.

Now, our timeframe, the objective we have established is that we think we can complete that full assessment process in the next 2 years, that is, the full assessment of what is the inventory of potential sites to be cleaned up in this country. It is an aggressive program. It requires full commitment on the part of the State program managers and us to get that job done, but we have laid it out to be completed by the end of fiscal year 1986.

Senator STAFFORD. I will promise not to keep interrupting, but if you have 2 years to go, that means you are going to have to have Superfund extended in order to do it.

Mr. THOMAS. We fully anticipate reauthorization and extension of Superfund, as you know. The administration is committed to that.

That assessment process we have on track. Hopefully, by the end of 2 years, we will have assessed all those potential sites. We will have determined the extent of the problem at those that require cleanup, and we will have identified those that should received priority attention under the Federal Superfund Program.

Now let me tell you the other activities that go along as a part of that assessment process. That is, not just to determine those that will require long-term cleanup efforts, but those that present an immediate and substantial threat to public health or the environment. That is the removal authority that you have given us under the Superfund statute. We deal with two things, both in this assessment process, to determine whether there is an immediate threat at that site, and whether site stabilization is required, whether it is

surface cleanup, whether it is some kind of encapsulation program, site stabilization, or a source control effort, an emergency removal.

Additionally, we continue to have the authority over spill response and unknown emergencies that crop up at any time to respond to them under the removal program. This will show you where that program has been and where that program is going. During the last year, we have substantially increased our use of the removal authority by broadening our interpretation of the criteria for an immediate removal.

As you can see, at the end of fiscal year 1983, we had completed 92 removals at those priority sites and 239 total. By the end of fiscal year 1984, we anticipate another 90 of those priority sites with hazardous site stabilization effort completed. A total of 409 sites would actually have been dealt with.

We talk about how many sites have been cleaned up. I can give you all kinds of numbers and tell you that we will have cleaned up 409 sites by the end of 1984. I would largely be talking about surface cleanup, however, and that is not what we call total cleanup when we talk about a site.

Our numbers of sites that are being dealt with under our removal program is growing dramatically simply because we are placing a priority on, once we assess a site, if there is a threat or a potential threat to human health or the environment, going is with our removal program and stabilizing that site.

Now let's talk about the longer term base of the program which is the remedial program, the one that relates to the national priorities list. The national priority list was established as just what it says, to identify those sites that should receive priority attention under this program of Federal assistance. They are generally more complex sites that require a large, long-term cleanup effort. By long term at any of those sites, I am talking about years, 30 or 50 years in some cases, to fully clean up and decontaminate, particularly when you begin talking about ground water.

So, let's talk about where we are in the first phase of cleanup at the priority list sites. First, let me tell you the national priority list is a process that has been underway for the last couple of years, identifying and establishing priority list sites. We have put it on an annual update basis. Last year, we updated the national priority list and increased it from about 430 to about 550 sites. We will be updating it again this summer. It is an annual process. We work with the States in our regional offices. They go through, after they have completed this assessment, after they have completed the full site investigation, a determination of those sites which should be priority sites and they are placed on that priority list. It wouldn't surprise me to see us add another 100 or 150 sites this summer as a part of that update process.

Additionally, we have begun and will begin with the next update, the inclusion of Federal sites as a part of the priority list process. So, at one place, whether it is a private site or a public site, public meaning State, or local, or Federal, on that priority list you will see those priority sites that we have collected and come to determine should receive priority attention.

This is where we are with dealing with the first phase of the priority list sites. I have already told you we deal with the immediate

threat through the removal program. Long-term cleanup is preceded by a full investigation. You often hear complaints about the fact that EPA studies a site forever before it starts to clean up. Under the remedial program, the investigation is often long term. As a matter of fact, 18 months is not an unreasonable amount of time, even an average, to consider for remedial investigation phase, because we are largely dealing with ground water contamination. We often have to sample over a series of seasons to get the full exposure and outline at a contaminated site as far as one of these more complex sites is concerned.

Senator BENTSEN. Mr. Chairman, if I might interrupt, I assume you have some kind of a standardized ranking procedure. Could you give us just an outline of how that is done?

Mr. THOMAS. For the priority list sites?

Senator BENTSEN. Yes.

Mr. THOMAS. We do have a standard process which we call our hazard ranking system. It identifies air, water, and ground water contamination pathways. It also assesses fire and explosion potential at a site. As our people in the field go through and assess a site, they do it looking at a pathway of exposure to a population. They then score that site, depending upon the potential for exposure to the population in one of those pathways. Our priority listing is based on a scoring, looking at the three primary pathways of air, surface water, and ground water. We use a cutoff score for the national priority list of 28.5. This is basically the process that we go through in identifying what should be priorities. It is a process that has been used for the last 2 years as far as the update of the national priority list is concerned. It is, I think, a well-documented process. It has certainly been debated through our Federal Register notice process. It has been debated back and forth. I think it has very well stood the test of time as far as being a good process for identifying priority sites.

Senator LAUTENBERG. If I could——

Senator STAFFORD. Senator Lautenberg.

Senator LAUTENBERG. Just as a point of clarification so that I am sure I understand, you have said that you might be adding 100 sites to this roughly 550 that we have. Is it fair to say that all of the sites around the country that have been investigated produce this list of the worst 550 and that these will likely be added to the bottom of the list or is there a possibility that they will intersperse through the list or may even produce the No. 1 hazardous site?

Mr. THOMAS. The latter. They will intersperse through the list. Basically, the list is laid out by hazard ranking score. As you look at a new site, if the assessment is very high, it may move up on your list. For instance, the Lipari landfill was our No. 1 site up until the last update, because of the interspersing as you move additional sites on the list. I will add, though, as we have gone over time, this last update, you can see a trend of the scores beginning to taper off indicating that we have begun to deal with the worst sites first in our scoring process. A natural tendency on the part of the State officials and our officials is to go out in the field with those most visible worst sites where the most input is coming from both local communities and local officials, and you begin to see a trailing off of those scores.

We have projected, by the way, that this national priority list, as we complete our assessment of all sites, might grow to as high as 1,500 priority list sites. I indicated we have 546 now. That is a part of this update process. We have made projections for the future on all of this. I will talk about in a minute how we have tried to define those numbers which I think is critical to your consideration.

This remedial investigation phase and the feasibility phase which is once we have investigated the full extent of the contamination, laying out alternatives for dealing with that contamination is one that we speeded up significantly during the last year. As you can see, we have those investigations carried out either by EPA or by responsible parties, that is, potential responsible parties at a site who, through an enforcement action, step up and carry out that investigation under our guidance, or our contractors and staff personnel can carry them out.

As you can see, we have moved already very rapidly to increase that curve of sites we are investigating, the first stage of investigation. As a matter of fact, during fiscal year 1983, we tripled the number of sites where we started an investigation from those that originally had been directed to start. As you can see, by the end of fiscal year 1985, which is the budget proposal that you are considering for the Agency now, we are projecting over 400 of those sites would actually be in the remedial investigation stage.

Let's now move to the next stage which occurs once you have completed that investigation you have made a selection of the alternatives. In the current law, Congress has directed us to look to an onsite alternative as our preference. That is that we should design and select an alternative onsite unless it is technically infeasible or there is a cost-effective solution for an offsite remedy that is equivalent to the onsite one. Often, the technical solution will be onsite remedies, that is, encapsulation or some other method of dealing with that contamination at that site.

I emphasize to you the sites we are dealing with under the remedial program are complex sites. Nearly half of them we estimate have ground water contamination problems. We also are not only talking about a source control solution, but we are talking about a long-term pump and treat operation for ground water cleanup along with that source control.

As you can see, remedial designs; that is, the the actual engineering design, goes up sharply in 1985. That is because of the sharp increase of investigations in 1983. You can see that is moving up quickly. You can also see that at the beginning of this fiscal year, we were already working at 56 sites or actually had design developments some of which were being done under enforcement agreements with the parties responsible for it and some of which were being done by us. At the end of this year, I anticipate we will be at 105 of the priority list sites at the design phase.

Now let's talk about where we are with actual cleanups. Here again we see a rapid increase as we move out to 1985 and you begin to see this pipeline heading toward the tail end. As you move in that investigation phase, out of it will come your alternative which will lead to design which will lead to construction. We are talking about a major construction program, part of it carried out

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by responsible parties through enforcement agreements, part of it carried out by our contractors whose contracts are a Federal lead project or managed by the Corps of Engineers for us or a State lead project managed by that State agency. We have four of those State agency managers here to talk with you about how they carry that out.

As you can see, we were working at 82 priority list sites with actual construction at the beginning of this year. That includes both construction and initial construction activity. In some cases, we will move in on a site and actually do initial construction, say, complete a surface cleanup before we have completed the full investigation of ground water and determined the long-term cleanup strategy for that site or we may move in and actually put in a source control operation at a site, say, encapsulate that site, before we have completed the full off-site investigation of ground water contamination and determined the pump and treat solution or how long it will run.

At the end of this year, we are talking about 120 sites we are going to be at in actual construction. You can see it moving on up by the end of fiscal year 1985. It is a massive construction program when you get into the number of sites we are managing, when you get into the amount of money we are talking about, and when you get into the complicated solutions. The technical difficulties at these sites are extensive in many cases. We are dealing with some of the sites from a technical point of view that you have heard about for a long time. We are still in the middle of dealing with cleanup as far as the Love Canal project is concerned. Stringfellow is one of the more complicated I have ever dealt with. In looking across the list of sites, these are not sites that you can move into and in very short order come up with a long-term solution that will stand the test of time. It takes tough, technical judgment and technical effort to come up with.

In summary, just where we are with priority list sites: 534 of those 552—552, by the way, is the 546 that are currently on the list plus 6 that have been taken off the list over the last few years as we completed work on them— 534 have some activity underway as of last December; 380 of them, we have completed a responsible party search. A major part of our first effort at a site is not just an assessment of the problem at the site from an environmental or public health point of view, but an assessment of potential responsible parties we can go against to begin moving to get that site cleaned up; 306 sites with remedial action. Remedial action means actually moving at the front end of the cleanup program. That may be the remedial investigation I am talking about, it may be a remedial action plan for that site, laying out the extent of the problem, when the project will begin, when we project the time to clean up.

There are 188 sites that actually have remedial investigation obligated. At 178 we have actually sent notice letters to responsible parties notifying them that we consider them a potential responsible party and they can anticipate us working with them through ensuring that they participate in cleaning up that site or in us trying to recover our funds when we clean it up.

At 89 sites we have removals approved. As I indiacted to you, that means 89 of those priority list sites we identified an immedi-

ate threat and went out and dealt with it under our removal authority.

At 63 we have remedial action. We have 50 with settlements, that is, where we have settled with a responsible party to take action, and we have the famous 6 cleaned up. That is what everybody talks about. Unfortunately, it is how many sites have been cleaned up. As I indicated to you, I can play with all the numbers I have talked about and I can give you different numbers as far as cleanup is concerned, but the criteria we use is we are going to complete work at that project before we say that site is cleaned up. That means we are going to deal with the full extent of the problem.

We are going to go through. We are going to take action at that site. If it is long-term action, we are going to take it before we say that site is cleaned up. It is a pipeline that you will begin to see more and more sites come out of as we pump more and more sites into.

Senator RANDOLPH. Mr. Chairman, could I ask a question at this point?

Senator STAFFORD. Certainly.

Senator RANDOLPH. I think there is an inconsistency among the States as to the number and serverity of sites on the Superfund national priority list. I am not narrow in my understanding, but I am a Senator from West Virginia, as other Senators represent their States, and in West Virginia, for example, you only have four sites on this list although it is a major chemical producing State, such as New Jersey. On the other hand, we have no more sites than the State of New Jersey.

When can we expect more sites to be listed in States whose programs are not as advanced as New Jersey?

Mr. THOMAS. Senator, your point is well made. To a certain extent, the determination as to how many sites get on the national priority list or have gotten on the list at this point has to do with how aggressive a State is in proceeding to get their sites listed. We have tried to compensate for that in EPA by also having independent capability in our regional offices to score sites and have sites placed on the national priority list even if a State has not moved forward to identify and score a site. We do it as a cooperative venture.

I would say, as I indicated, as we go through that next 2 years of assessing all the sites, all the potential sites, determining those that require site investigation, from that, determining the scoring of that particular site, you will see much more of an evening out across the country of sites that are on the national priority list. It will not be evening out in equal numbers, but an evening out in that you will see most all States that have potential problems dealing with those problems.

I think that is the process we are going through. It is a updating process. Just in the last update, I saw one State that had zero sites go to 20 sites. It had to do with where the State was in assessing its problem, working with us, and getting those sites on that list.

Senator RANDOLPH. Mr. Chairman, I think that is a valid answer that he has made. Thank you.

Mr. THOMAS. If I could just mention a few more points to you, Mr. Chairman.

Senator STAFFORD. You go right ahead, Mr. Thomas.

Mr. Thomas . That basically is the status of where we are with site work. We are dealing with a lot of sites. We are dealing with them both as far as the immediate threat and the long-term problem is concerned, and we are dealing with them with the Superfund money that you have provided us. As you know, we have requested a significant increase in those funds for fiscal year 1985. We have also requested supplemental funding for this year. As a matter of fact, since I have been at EPA, we have gone from an annual budget for Superfund of $210 million in 1983 to the request for 1985 of $640 million. We will nearly double the staff in that same period of time.

That in itself is an issue. How fast can we expand this program? We are expanding it, I believe, about as fast as you can expand it. As you can see from those charts, we are going up rapidly on the curve of sites we are dealing with.

The enforcement program is one that has received a good bit of attention and one that I want to make a couple of points about. First, as you see, we have moved forward with a potential responsible party search. My objective is to have every one of our sites on the national priority list have a potential responsible search completed by the end of this year. Then as we add sites each year, we complete that potential responsible party search that year so we can immediately begin moving with those responsible parties, potential responsible parties, to determine whether they can or will or we can encourage them or force them to take action at that site.

We classify all the sites, once we have completed that responsible party search, as to those that we think have the best potential as far as enforcement is concerned and those that we think we should move on as far as the fund is concerned. That is working out well. We have a process for moving them from one classification to another. They may be enforcement lead, we determine that our evidence is not as strong as we thought, and we move it over to fund lead.

You have given us very broad authority as far as enforcement is concerned under sections 106 and 107. I would emphasize that we are using them very aggressively. Through the administrative authorities that you gave us under section 106, we are issuing administrative orders. In 6 months of this year, we have already issued more administrative orders than we issued in all of last year. We are using those orders for consent agreements with the responsible parties and we are issuing them as unilateral orders which provide a basis for us to seek triple our damages when we come back on a cost recovery case, and we are moving with our cost recovery cases.

This year, you will see referrals to the Justice Department of over 40 section 107 cost recovery cases. We have already moved on our first case as far as treble damages are concerned. You will begin to see more of those.

Thus, the authorities you have given us are very strong as far as enforcement is concerned. We think we are using them. I would tell you, to this point in time, we have settled for over $250 million in cleanup with potential responsible parties at sites. That, I think,

is a very favorable figure. Often, when you hear discussions of cost recovery, those people are not taking into account up front negotiated settlements with responsible parties where they are undertaking the cleanup under a consent decree entered into with us through the court under our guidance and as per our direction. We just settled on one site, for instance, where the cleanup is estimated to cost approximately $50 million. That is a cleanup that will be undertaken by those responsible parties under a consent decree. That is not the recovery of funds we have expended, but it certainly is in the category of offsetting use of potential funds that would have to have been spent under the Superfund. That was your intent in giving us the authority, and I think it is working well.

The cost recovery aspect, that is, getting money back that we have spent I think will work well as we go along. We have not recovered much money, becuase you begin that recovery process after you spend it, after you have completed work at a site.

As I indicated, we have a number of sites we have referred to Justice. We have $125 million in cost recovery casework right now, either at Justice Department moving through to litigation or in our process of being prepared for referral to Justice.

As far as organization and management are concerned, I think we have made a lot of progress in getting both Federal agencies and State agencies working together much more productively. We have a way to go. With the Center for Disease Control, we have a full-time CDC person in each of our regional agencies working to provide technical support on a site-specific basis, whether it is an immediate threat, helping our on-scene coordinators determine the extent of the public health threat, providing coordination with the State health authorities, providing long-term advice as far as health studies are concerned if required at a particular site.

We have nearly completed a memorandum of agreement with HHS that more fully defines CDC's role as it relates to our role in doing health assessments as a part of our remedial investigation. We completed a memorandum of understanding with the Department of Justice quite a while ago. The Department of Justice's staff is increasing significantly. The Corps of Engineers, as I indicated, is moving ahead very aggressively to manage Federal lead sites for us. The U.S. Geological Survey, the Federal Emergency Management Agency, all agencies where we have established a good working relationship for support.

As far as cleanup is concerned at Federal facilities, the Department of Defense in the big one. We got involved with the Department of Defense a good while back. We have worked out a memorandum of agreement with them that defines how we will work together with the Department of Defense on their sites where there is a problem, whether it is on their base, whether it is on their base with potential offsite problems, whether it is on their base with only onsite problems. We think we are moving forward well with the Department of Defense as defined by that MOA. We have gone further and developed a strategy which we are working with OMB on now to further define how EPA will work in the budget process and the review process for all Federal agencies as far as Federal cleanup is concerned.

As I have already indicated, we have begun the process with the next update of including Federal facilities on the national priority list if they meet our ranking score. We are treating them just like any other site.

On EPA management, we just completed major delegations of responsibility to our regions. As we move into a much bigger program, we have moved the management responsibility down to a lower level as we have completed guidance in the program. We think it will move much more expeditiously as far as decisionmaking is concerned. We began that process about a year ago, and we have moved responsibility on our decisions on all of our emergency removal action, and all of our initial construction actions down to our regional offices.

The States, and you will hear from the States, and EPA are working in two different task groups to sort out a better working relationship with the States as far as our contract managers are concerned. I think we have broader flexibility within the statute that you gave us than we exercise in contracting with States to do major work. I think we have a good productive process underway with the States aiming toward an expanded contracting capability in fiscal year 1985 to move forward with a lot of work managed by the States covering their administrative costs out of our fund.

Additionally, sorting out responsibilities between State and Federal agencies as far as enforcement is concerned, we are making good progress there. We have work to do, but I think we are coming to grips with it. We are working with the National Attorney General's Association and the Association of State and Territorial Waste Management Officials.

Finally, with the public, we adopted an agency community relations policy about 10 months ago. We have put community relations personnel in every one of our regional offices. We require site-specific community relations plans at every one of the sites we work on for full public involvement, knowledge of what is going on at a site, participation and input as far as the decision on cleanup at a site. It is one that we are really trying to emphasize through training our personnel, review of actions in our regional offices, funding of efforts at a State level to ensure that the public has an opportunity to know what is going on, to provide input on what is going on as far as site cleanup is concerned.

Additionally, we have moved forward to deal with a lot of policy and guidance issues, many of which I am sure this committee is concerned about and interested in. They deal with issues that relate to enforcement and our settlement policy. We have a written settlement policy. It is being used. It is being tested.

We are developing a full remedial investigation and feasibility study guidance. The RCRA/CERCLA issue that Senator Chafee mentioned; that is, the application of other environmental statues at Superfund cleanup sites, all of that which is involved in the how clean is clean issue, we feel we are moving on that. We are moving, we think, well, with revisions to the national contingency plan to sort that issue out. I can go into that more if you would like to.

I have already mentioned that we are sorting out the State/Federal role and, finally, ensuring that there is a site management plan at every site on the national priority list. If we are not work-

ing on it now, we work with the State to develop a specific plan for when that site will be worked on, when it will come up next in the process, who has the lead on it, State or Federal, enforcement program, and where there are decision points.

The issues for reauthorization, I have already talked about a number of them. The ones you are coming to grips with include three big categories. The first one is what is the size of the problem? What is the pace at which you want us to try to move forward to try to deal with that problem, and how are you going to finance that effort? All of those are things you told us to come to grips with in those 301 studies in your original statute.

We have that work underway. We have done preliminary estimates. You have copies of that or the staff does as to what we think the extent of the problem is. We will have a much better handle on that toward the end of this year.

I am getting into the whole issue of timing on when I think we will have a much better handle on some of the issues in reauthorization and why I think the process that you have underway on reauthorization is excellent, very productive as far as we are concerned, and why I also think that the final answers which should be incorporated in reauthorization will not be available until you move into fiscal year 1985.

The size of the problem is one of the big ones. The pace at which you want us to deal with it and how you want to finance it are others. Do you want to finance it with an expanded feedstock, expanded appropriations, waste end tax? What are the implications of waste end tax? Can it be married up with feedstock? What are the implications of expanding feedstock or eliminating exemptions? All of those are studies that we have underway right now. We will have good solid answers, I believe, toward the end of the summer and the early part of the fall to provide you with those study results.

The second series of big issues you will deal with are statutory modifications, that is, refinements of language that is in that stutute, some of the issues you have already talked about. For instance, they include whether you want to deal with more specific language on cleanup at Federal facilities. We are dealing with that and we think we are making good progress. Also included is whether you want to deal with cost sharing or a differennt status for credits or a different status for sharing on 50/50 sites. We are looking at all of these issues as well. We have a task force within the Agency that is looking at each of them. That task force is on a track to complete a review of six pages single spaced of issues that were identified by our staff, other Federal agency staff, and State agency staffs in the fall of this year. That also is information that we will work with your staff on as you go through your deliberations and will provide to you when we complete all of that review.

Finally, statutory add-ons, whether you want to add on additional authority, whether it is, as Senator Chafee mentioned, issues associated with siting and how you would like to deal with that and how it relates specifically to RCRA. Underground storage tanks, whether you want us to deal with that differently than we are dealing with that now. Those are also issues that we are studying. We are coming to grips with them. We are trying to pull informa-

tion together not only within EPA but within the Administration as a whole. We will share that with you as we go along, share where we are today, and where we think we will be when we complete that full analysis. That also, we think, is on a track that basically in the fall or the first part of 1985 we will have to you.

In summary, let me say what you have given us to work with is a good, strong statutory base. There have been problems with the program, massive problems with the program that you know better than I do. I have been there just a little over a year.

For the year that I have been there I can tell you that the issues are complex. Moving this program forward, I think, probably should be the highest priority that we have in EPA, and one of the highest priorities you have as far as Congress is concerned in making sure that we do it the way that you want us to do it. We are committed to that. I think we are on a good track. I think that the process of reauthorization is moving as it should, that is, with full review by you of those issues. I think we will be in a much better position later on this year to give you conclusions from our part on a lot of the major issues you are trying to come to grips with. That does not mean we don't have a lot of information we can share with you now in dialogue that should be shared now. I think final conclusions on the big issues this time around should wait until we have final, good, solid evidence as you move forward with reauthorization.

Mr. Chairman, I appreciate the opportunity for us to be here and I will now get into questions that you may have.

Senator STAFFORD. Thank you very much, Mr. Thomas.

I would say first to my colleagues that we are gratified at the attendance this morning. In view of it, I would recommend, if my colleagues are agreeable, that we limit ourselves in the first round of questions to 10 minutes each. Is there objection to doing that?

Hearing none, that will be the way we will go. I would encourage members who have large numbers of questions to submit as many as possible in writing, if that is agreeable, Mr. Thomas.

Mr. THOMAS. Certainly.

Senator STAFFORD. The Chair will do that himself. I will reserve the right, if there is no objection, to other members who may have questions who are not able to be here to submit questions in writing also.

Let me say, Mr. Thomas, that was an excellent presentation in this Senator's view. The charts you have with you prove pretty conclusively that there has been a vast burst of energy since you became the director of the program and Mr. Ruckelshaus became the Administrator of EPA. It shows very clearly that there was not adequate opportunity to move ahead under the previous Administrator. We are glad that we can see that progress has occurred since you have been there.

It is my understanding that the Department of Commerce has undertaken a study of the Superfund program including projections of total costs and time required for completion of the abandoned site program. Are you familiar with this study and if so, could you comment on the validity of the assumptions made by the Department of Commerce? Also, would you provide to the committee the name of the official responsible for conducting this study.

assuming one is going forward, as well as the identity of the person or persons who requested it?

I would like the committee to be provided with a copy of the study if you have it available, together with your comments on the major assumptions and conclusions.

Mr. THOMAS. Yes, sir. We can provide that. We have a copy of the study. We are familiar with it. We have a copy of our comments which we will give you.

The individual in the Department of Commerce is Dr. Sydney Jones who is Under Secretary for Economic Policy Analysis, I believe. He and I have conferred about the study.

The study was conducted with a primary emphasis on their part of developing a funds flow or economic analysis model for determining the full extent of cost of cleanup. The unfortunate part of the study is that the Department of Commerce staff that worked on the study used a whole series of very early data to input to their model so they came out with what we think is a good model but with very poor conclusions. The Department of Commerce has submitted that study to us. Unfortunately, they also released the study in draft form to a number of other agencies. I think that they clearly recognize now that their assumptions were early and premature and I think we now have that study back into the right channels.

It was unfortunate that it happened. The Department of Commerce managers recognize that now and are working closely with us to make sure that it is not a study whose conclusions are misused by people.

Senator STAFFORD. One of the issues which is attracting an increasing amount of attention is the use of waste end tax to finance Superfund activities. Apparently, relatively few people recall that this committee has previously spent considerable time and effort evaluating the desirability of a waste end tax versus a feedstock tax. We concluded 5 years ago that a waste end tax would be very difficult, perhaps impossible, to administer and that if Superfund relied exclusively on such a financing program, the law would be doomed to failure.

It would be appreciated if you could provide, either now or for the record at a later time, the following information: How many collection points would be required for a waste end tax as opposed to a feed tax? My recollection is that it would be in the thousands probably.

How long would it take to issue the regulations establishing a waste end tax and how much longer might the process require if there were litigation, as there would almost certainly be? How would the waste end tax be designed so the large volume but low hazard waste generators, such as the mining or steel industries, would pay only their fair share? What effect would such a tax have on the incentive of generators to illicitly dispose of hazardous waste? Finally, if such a tax were established, should it also draw money from waste not covered by RCRA, such as Clean Water Act discharges and Clean Air Act emissions?

I presume you prefer to answer in writing.

Mr. THOMAS. Senator, we have been looking at the issue of waste end tax. We can provide some information currently as far as the

first phase of that review, and that is looking at a number of States and the administrative issues associated with trying to implement a waste end tax. We do have a good bit of information on that. We are continuing our review of waste end tax as a part of one of our 301 studies as a potential source of financing for the fund, and we are looking at a lot of the issues you just mentioned.

We are looking at the disincentives associated with waste end tax, how real they are. We are looking at the kind of criteria that would be used as far as setting a tax, that is, volume versus toxicity versus other components. All of those are very legitimate questions that need answers. The process we have underway we think will lead us to fairly conclusive answers on waste end toward the first part of the fall.

We are looking at it not just as an alternative to feedstock. We are looking at it as a tax along with feedstock. We are looking at it as a tax alone. We are taking a look at all of those issues that you have talked about. I think it is a very complex issue. It is certainly one that I think requires a lot of review before action is taken.

Senator STAFFORD. Thank you very much.

Senator Randolph.

Senator RANDOLPH. Thank you, Mr. Chairman.

Lee, I believe it was June of last year when you were confirmed. Is that correct?

Mr. THOMAS. Yes, sir.

Senator RANDOLPH. The reason I mention it is that sometimes I think we are inclined to be too critical of those in the Government such as you. You have jobs that really are difficult and tough. It is very easy to criticize, but sometimes I think we fail to thank people like you. No one sitting in this room could be other than impressed by your knowledge of this subject matter and your dedication to the work that you are doing.

I don't desire that you make any response to that whatsoever. It is not a pleasantry that I have said. I believe it is important that from this dais we would say something like this from time to time.

I made it clear that I am a strong supporter that action be completed this year on extension of the Superfund including a mechanism for the compensation of victims of those substances that are hazardous to life. I discussed this rather extensively at our last hearing.

I think today we need to concentrate on the post closure liability provisions of the Superfund law. Our hazardous wastes regulation program has, as you know, three basic protections. To prevent the hearing today on hazardous waste disposal from becoming tomorrow's Superfund site, facility standards, restrictions on the types of wastes going to those facilities and financial responsibility requirements, all of these are mixed.

Among the financial responsibility requirements that I feel are essential are those where corrective action during the operations and for problems during the post closure period. Do you support, Lee, the requirement for post closure financial responsibility for unanticipated problems of hazardous waste sites? Is there any other available mechanism to provide this financial assurance that I have spoken of?

Mr. THOMAS. Senator, we are, in the regulatory assistance sense under RCRA, trying to come to grips with the issue of financial responsibility and corrective action requirements during the life of a facility as well as at the closure of the facility. As you know, we have financial responsibility for a certain limited portion of the closure and post closure monitoring period. The actual corrective action in the financial responsibility issue, though, we have under review right now.

I anticipate that we will be coming to a definite position on that in a regulatory sense at least determining how we move forward with financial responsibility for corrective action regulations within the next several months. That will deal with a broader array of facilities than, say, the post closure fund deals with now. The post closure liability trust fund that is authorized under Superfund has specific criteria that you have laid out as far as eligibility where that fund is concerned.

Senator RANDOLPH. We began that last September, didn't we?

Mr. THOMAS. That is correct. The first of October is when the tax actually began. The criteria to be used will mean that there are a limited number of facilities that will end up probably qualifying for that fund. We are now assessing the full implications of that and providing you a report which you asked for from us. The report on the status of the post closure liability trust fund and how it relates to the full array of facilities that may need to take corrective action will be finished in September.

Senator RANDOLPH. Is the ceiling $200 million?

Mr. THOMAS. I have forgotten exactly what the ceiling is.

Senator RANDOLPH. I think it is $200 million.

Mr. THOMAS. Yes. $200 million is supposed to be collected up to that point and then the tax is not collected again until the balance falls under that.

Senator RANDOLPH. How much has been collected at the present time?

Mr. THOMAS. I don't have that figure, Senator.

Senator RANDOLPH. You will place it in the record.

Mr. THOMAS. Certainly.

Senator RANDOLPH. I appreciate that very much.

Are you attempting now to implement the provision requiring the tax to be calculated on what we call a dry weight ton basis, and what does that mean?

Mr. THOMAS. I am sorry, Senator. I don't have a complete answer to that. The Department of the Treasury, as you know, has the responsibility for actually implementing that, and I don't know the answer to that.

Senator RANDOLPH. When do you expect the first facilities to qualify to have liability transferred to the post closure fund?

Mr. THOMAS. The criteria that are laid out are first that the facility would have to operate in accordance with a permit issued by us, and I don't anticipate that we will issue many of those permits probably at least for the next year. We are anticipating issuing most of those permits for disposal facilities over the next 5 years. They would have to operate in accordance with a permit which we have issued.

They would have to operate for a 5-year period of time before liability would transfer to that fund. There is a lag time of some years before you would actually begin to see liability transferred.

To a certain extent, that is not totally consistent with the liability provisions that you have enacted in other parts of Superfund which clearly indicate that any contamination caused by an owner or operator is the responsibility of that owner or operator. So, that is why I indicated that based on your criteria, there would be a limited number of facilities that will qualify under the post closure liability trust fund. The other facilities that don't qualify as far as corrective action is concerned now, we would use the enforcement authorities under Superfund and RCRA to go against those facilities to require action, and we are looking at regulations that would require broad financial responsibility for corrective action for all facilities.

Senator RANDOLPH. Just a final question, Lee, and I think I have stayed within my time. One area of concern that some groups have brought to our attention, certainly to my office, has to do with the actual closure before the liability is transferred to the fund. There is a waste management industry, and we understand it. Some would like to know when the 5-year period has passed, perhaps they would like it even shortened, while others would like at least partial liability to continue through the entire 30-year post closure monitoring period.

What is your observation on that?

Mr. THOMAS. Those are some of the very issues that we are coming to grips with in that report that we are going to provide to you, Senator.

Senator RANDOLPH. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you very much, Senator Randolph.

Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman.

I would just like to comment that I think it would be a worthwhile experience for any of the members of the committee who do have a chance to go out and take a look at one of these sites that has been cleaned up or at least been visually cleaned up. I went out to visit the Stringfellow site which still has enormous potential liability, in dollars, there. You look at the site and it looks like a playing field. You realize that just getting hauled the drums away and removing the debris is really a minor part of the problem or, if not minor, hardly the total problem. There they are wrestling with great barriers and concrete construction dams in order to divert the flow of the water and control the plume and where is it going.

In your statement, Mr. Thomas, you mention that some of these are going to take 30 years to determine, and I think you are right. This is a horrendous problem.

Let me ask you, some of the States are short of money but some of the States have money. Take a State like New Jersey that is prepared to move ahead with its own dollars because of the lack of Federal dollars. What do you say to a proposition, and we have run across this in sewage construction and in other areas, to letting a State move ahead with its own dollars under your supervision with all your advance approvals and continuing observation, and then when the dollars come through, the State can obtain credit for its

contribution in other sites for, say, the State's contribution of 10 percent. Is that agreeable to you?

Mr. THOMAS. I think that that kind of provision does have some merit as far as States are concerned. There have been concerns about a variety of State credit provisions that have been brought forward. As a matter of fact, I had a good bit of dialog with New Jersey about 6 months ago concerning their desire to move forward and how much money we had available to work with them versus how many sites they had available. I think we worked out a good pathway in New Jersey at that point in time and I think we are fully committing to all the work that they wanted to do this year.

I do think that there is the potential, though, that there may be some States that want to move forward at a site before we are prepared to move forward. I think we should support them in doing that with certain restrictions. I think what you are talking about is restrictions, because if we are not careful, it can get way away from us.

Senator CHAFEE. Obviously, but we are assuming here that there will be the EPA technical and legal control. It will all be worked out by contract. It is just a matter of whose dollars are involved. It isn't that you are not prepared to move ahead with the supervision. It is that you don't have the dollars.

Mr. THOMAS. I understand that. I think the concern I would have, Senator, is that if we are not careful, if we allow some States to move forward at their own pace without some kinds of restrictions and management review by the Agency, we may find ourselves in a particular year being totally committed to a State or a good portion of the money to a State as opposed to having to look at the national effort of how we are going to deal with all the sites. My understanding, what I have seen of some of the language that is being considered on the New Jersey proposal is that that is not the case with that.

Senator CHAFEE. That is right.

Next, let's assume we have a site that is not on the national priority list, but where the drinking water is contaminated by a substance such as gasoline. Under current law, can you provide alternative drinking water supplies to the community?

Mr. THOMAS. Not if it is gasoline, because of the exemption for petroleum products. We do under our removal and emergency authorities, have the authority to go in and provide alternate drinking water supplies in a situation where there is contamination of drinking water for substances that are covered by CERCLA.

Senator CHAFEE. But not gasoline?

Mr. THOMAS. Gasoline, because of the petroleum exclusion, is not one of those substances.

Senator CHAFEE. OK. I will have a question for you for the record for an explanation of the problems presented at the Long Prairie, MN, and Canoga Park, RI, sites. I would seek an explanation of you as to why Superfund money couldn't be used.

Finally, I would like your views on the withholding of Superfund money to a State or using as a leverage to force State or local governments to locate new and safe hazardous waste management facilities within their borders or entering into some kind of a cooper-

ative agreement with several States so there can be a site available. What is your thought on that?

Mr. THOMAS. Senator, we have talked about it before. I still haven't come to a point that I would favor withholding Superfund money with a requirement like that.

The issue of disposal of waste in a particular site in a particular State is an issue that we are dealing with under RCRA. We are getting a good bit of concern on the part of States about taking waste into their State from other States and we are trying to come to grips with that in the context of developing more specific siting regulations as to what sites would be appropriate, what sites would not be appropriate for hazardous waste facilities. As you know, we have very broad regulations now and very broad siting criteria. I think that to this point the capacity issue nationally has not presented itself to us in such a way that we feel we should begin the kind of direct intervention that you are proposing in requiring the development of satisfactory or land disposal facility.

Senator CHAFEE. I am not necessarily saying land disposal facility, the problem I am pointing at, Mr. Thomas, is that RCRA is fine, but RCRA just controls what kind of a site it is going to be if you have a site. What I am worrying about is this business of everybody saying put it in somebody else's backyard. The local options that are now existing in the various towns and cities and counties across the Nation which forbid any such siting development in their area. So, you are going to have large sections of the country where there are not going to be any such sites. This is an encouragement to all the midnight dumping problems and the difficulties that caused the creation of Superfund in the beginning.

Mr. THOMAS. I share your frustration on that and your concern. I am beginning to be more concerned as I get more input from around the country about geographic problems as far as disposal is concerned. Additionally, as we try to come to grips with siting some of the facilities under RCRA and the "not-in-my-backyard" problem that you are talking about is a very real problem, at this point in time, though, as far as capacity is concerned, if you look nationally at the capacity that is available for disposal of wastes, commercial capacity, and onsite capacity, they are far underutilized.

Senator CHAFEE. Well, we can spend hours on this, but let me just say that, sure, the capacity may be there but it doesn't do much good if there is capacity outside of San Diego when people in New England are not going to haul it that far.

Mr. THOMAS. Yes, sir.

Senator CHAFEE. If there is an RCRA approved site in New England, I would be curious to know of it.

Mr. THOMAS. As you know, under RCRA, there are provsions for compacts for States to come to grips with the issue on a joint basis. I think there is some merit to the kind of discussion that you would like to have about how do we provide an incentive for States to begin to come to grips with that collectively. That is not happening now.

Senator CHAFEE. Well, there is nothing like a few dollars to make the States fall into line. I am not saying it has to be within their borders. I am saying that they have to have access through

some kind of a compact. It could be a compact with the contiguous States or indeed it could be a compact with a State that is some distance away.

Well, we haven't heard the end of this. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Chafee.

Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Mr. Thomas, you know that I have hopes for a reauthorization of Superfund this year. If the act is not renewed with some changes this year, cleanup efforts in New Jersey will be delayed, even though you acknowledge that New Jersey is hard at work on this, and we are prepared as a matter of fact, with some funding already in place, to go ahead. I would like to review two possible revisions to the law, and get your reaction.

New Jersey will be ready to spend about $170 million next year including $123 million on actual cleanup or construction projects. Even with a beefed up Superfund, it is unlikely that New Jersey could receive 90 percent of the costs for these projects out of Superfund in 1985. The State is willing to spend its own money with proper controls. I think you make a good point about proper controls. I don't think it is New Jersey's intent at all to jump up the priority list by getting the clean up done. We will wait until we are reached on this list, for EPA to reimburse the State.

However, we have to know that sometime in the future there is going to be a credit against these expenditures for work at these sites. New Jersey is willing to move ahead with its own funds, and doesn't want to be penalized for this by giving up Federal assistance it would get if it waited. The legislation that Senator Bradley and I proposed last year would enable the States to do this but to get a credit to be applied against future expenses.

Again, with the proper controls in place, let me ask what you think about this approach?

Mr. THOMAS. I think, with proper controls, and I think we do have to look carefully at what those controls are, we do need to take into account how we can move forward with States in that regard. New Jersey is the one State that I have had a good bit of dialog with. We had it last year as to whether they could move forward in that regard.

We ended up concluding that it was not necessary with New Jersey this year. We were able to fully support the program this year that they were prepared to do. As a matter of fact, in really getting down to brass tacks with New Jersey, we brought down considerably the number of projects that they wanted to do versus the projects that they were ready to do this year to a level that we both agreed on was a level that we could support.

I think the kind of language that I have seen so far in preliminary form that you are talking about does provide the kind of controls that I think would be necessary to make sure that there is a very orderly process and we don't get things totally disproportionately out of line in future years as far as our funding is concerned to a particular State.

Senator LAUTENBERG. OK. Can we use—and I don't want to preempt any other State's or program—but if we use this as sort of a

model, then you wouldn't have any problem with that becoming part of the reauthorized law?

Mr. THOMAS. Let me reserve on that a little bit, Senator, in that I would like to look more closely at exactly what the implication is. As I understand the language that is being talked about, it would be that if a State moved forward to expend State funds at an approved site under an agreement with EPA and that it is one of the sites on the N.P.L. Those funds would then be available for the State's matching purposes later on when we were ready to move forward at that particular site, for the State's 10-percent match or 50-percent match according to what the particular site was.

In that limited regard with those kind of controls it seems to me that that would be a workable approach.

Senator LAUTENBERG. The next thing, then is the reauthorization—the President's commitment, your commitment, the administration's commitment to reauthorization. Since there seems to be agreement that it is necessary, certainly I haven't heard anybody, you or Administrator Ruckelshaus, suggest that the current funding levels are sufficient. No one is saying that any more. That is passe, really.

Why, then, do you think we have to wait until the last minute, if I may characterize it that way, to go ahead with this reauthorization? In my discussions with Mr. Ruckelshaus, he has said that some of the reporting that is due in December is ahead of schedule. I assume that you would agree with that. Some of it is ready to be made public now or distributed now. Why must we wait until planning is perhaps beyond us, or panic sets in in the States, to take action. Why can't we go ahead with your support, with your help, to get the Superfund authorized early instead of waiting until it is so late that everybody is rushed and not thinking properly?

Mr. THOMAS. Senator, we clearly don't think you should wait until the last minute. When I was asked for an opinion on when we thought the administration would be in a position to propose a series of substantive changes for reauthorization, I laid out a timeframe that I thought made sense as far as a professional review of the program is concerned and was consistent with the efforts that we had underway.

As I indicated, we have had a review of the Superfund program for reauthorization underway for quite some time. Just as this committee has begun its work, we began our work early on. We think that that work will lead us to full conclusions on the complex issues that you jave to deal with, the size of the problem and pace being just one of those complex issues, in a timeframe that will allow you to move forward with reauthorization in 1985. I don't think that we will have all of those conclusions in place to give you the answers so that you can do it in fiscal year 1984 with our full support.

That is the basis for the timeframe I laid out. It is just where I am. You see those charts. There is a trememdous amount of information that is being gathered from the activity that we have underway right now as far as how much it is costing to clean up a site, how many sites there are out there that need to be cleaned up, how fast can you move at a particular site. All of that is being fac-

tored into the kind of material that I will have available for you in the fall.

There is no question I can provide you with information right now, just as I have done, as to where we are. We did preliminary assessments back in the fall for our budget purposes. You have copies of that. I think, though, that the kind of issues that you have to come to grips with in reauthorization requires, at least from our point of view, the kind of timeframe that I laid out for the Administrator that was basically accepted by the administration. That is, let us do all the work that we are doing to work through these issues this year and be prepared to go forward with an early authorization in 1985.

Hopefully, that is not going to be a last minute effort. Clearly, it is not from your point of view. You are well into the process, and we would encourage that.

Senator LAUTENBERG. As you know, the best laid plans, sometimes go awry, and we could come to a grinding halt by virtue of a change in administration or management of the agency and so forth. We are just very anxious to get on with it. The statistics, as I am sure you know, are very interesting and somewhat reassuring, I would have to admit. But when you sit with a different array of witnesses and you talk about people whose health, whose families and lives are being disrupted, perhaps ruined, by exposure to these toxics, we want to get on with it and get to work. The first stage is to pick up the initiatives I think would be very helpful.

Mr. Chairman, I don't want to run out my time too much. I have 1 minute? Well, I will forgo that precious minute and hope that I can add it to my 10 later. Thank you very much, Mr. Chairman.

Senator STAFFORD. Thank you, Senator.

Senator Simpson.

Senator SIMPSON. Frank, I have learned here that with 1 minute you can save your soul.

Thank you, Mr. Chairman.

Indeed, you have been most impressive to me as you present this. It would appear that you are doing your job, and that is what all of us on both sides of the aisle desperately hope for with regard to Superfund. You must be doing your job or else the lights would be burning in this room, and that is pleasing to me to see that that is not the case, because you are doing your job.

I was most impressed, and I realize that I am using my own time, but I do have a few questions. I would hope that everyone might read a talk that Bill Ruckelshaus made to the Economic Club of Detroit on April 16, 1984. It was an extraordinary statement that just seems to match everything that our frustrations and our goals and what we are trying to do. It is vintage Ruckelshaus. I just would quote one or two sentences from it. He talks about the environmental quest and our wanting to do something desperately, and he says, "In the environmental area, I believe we are ideologically liberal and operationally conservative." He described that the other way around in most things, but what he says is this, has led to difficulties in the formation of an effective national environmental policy.

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While it is a fine thing to embody high ideals in legislation, laws should be written so that mortals can put them into effect on this imperfect earth without either torturing the language or prescribing nonsense.

Then he goes on to say, and this is the real grabber:

It is because we encourage public officials to strike extreme postures as defenders of the environment while we shy away from requiring the hard decisions implied by such postures.

That is pretty good stuff, and that is where we deal with Superfund or nuclear waste or anything else that is hard and tough and nasty. Everybody wants to do something about it, but nobody wants it there. What Senator Chafee is saying is so true. I see it so much in the many things that I deal with in this place. It is so easy to grab a microphone and get everybody all juiced up, and then we all just run around in a circle trying to do something, as if the national emblem is give us more time or no, we have had too much and now it is time to do something even if it is wrong.

I would ask you this. What occurred at the hearing here 2 weeks ago with these extraordinary people who have been so desperately affected in their own lives is very real. There isn't one of us in this room that doesn't believe that. It is as if you don't buy that all, then you are hard and pinched and driven and evil. That isn't the case, but somewhere along the line you have to tie together the actual injury or disease or fate of a wretchedly affected person with an actual event, such as that substance, that toxic chemical, that hazardous waste, that dioxyn, that agent orange, that exposure to radiation, and that is tough to do. What we end up doing in our political clammoring is hammering something together which solves our guilt and then we move on to something else and leave it for you or any other agency to administer because we have said, we did our job. We passed the statute.

Let me ask you about the victim compensation activities, those schemes which have been proposed. Essentially, EPA would be responsible, I gather, for determining when exposure to a hazardous substance has caused injury or illness. Is that a job that the EPA has the scientific resources and expertise to do, and what difficulties would you see in carrying out such a mandate?

Mr. THOMAS. Senator, let me make a comment, and then I am going to let Jim Barnes comment on it. Jim has really been leading in the Agency with our support the Agency's review of the compensation issues.

The issue of risk assessment and health risk assessment is a very real issue to us as far as this site work is concerned in that it is a basic component of the process that we go through now at sites. It is as controversial and complex technically and scientifically and administratively as any issue we deal with at sites, determining the exposure pathways, determining the toxic effects of particular chemicals, determining the particular routes those chemicals may or may not have taken, and the relationship or potential relationship that the chemical in one site has with the people in another site.

That is an issue we deal with, because part of the cleanup program that we have underway is to deal with both immediate threat to public health as well as long-term threat to public health of those hazardous waste sites. So, to ask does EPA have the ability to

deal with that, I would say that EPA deals with the health risk issue and knows that it is extremely controversial and extremely complex, particularly when you get site-specific.

Let me, let Jim talk about the compensation issues.

Senator SIMPSON. If you could, and then I have a limited time, Jim. I have worked with you before on other issues and it is nice to see you.

Mr. BARNES. It is a pleasure to see you again, Senator.

Let me offer, if I might, to give you something as part of the record, an analytical piece that we have been doing as part of our cabinet council process which addresses the question you have asked, what are the differences between the kind of risk assessment exercises we go through to set standards to try to protect people from a risk posed by exposure to chemicals and the problem of trying to establish the causal linkage that is involved and whether you are in litigation or that is involved in some of the administrative compensation schemes? That is really a much more difficult and more complicated aspect.

As I think maybe you are suggesting, we are really operating at the limits of science in many cases when we are involved in the standard setting process, and I think some of the proposals that have come before Congress really ask science to do something by way of establishing those linkages that it is just not capable of doing at this point. I think you have also indicated that there are some resource implications for the Agency and for society. There are limited numbers of people that are able to do this analysis, and the question is whether you should divert them from the kind of broad scale command and control regulatory programs that the Agency has to further throw light on case-by-case determinations. I think that is a critical one.

Senator SIMPSON. I think it is something we must carefully examine as to whether you have the resources, the scientific expertise, to exercise and do that.

Let me just ask one quick question about mining wastes. We are grappling with that with RCRA. If mining wastes were not considered to be hazardous wastes by EPA or Congress, and we were to decide that, could the EPA still be in a position to repond to any actual or threatened releases if there were pollutants or irritants or contaminants that indeed may present an imminent and substantial danger to the public health or welfare? Is that availability there?

Mr. THOMAS. I am going to ask Gene if he would respond a little bit to that. As you know, the Superfund statute talks about hazardous substances and also talks about pollutants and contaminants. We do have the authority under the current statute to deal with all three categories. I would suggest that if mining wastes were not in that hazardous substance category, we would have authorities as far as pollutant or contaminant to deal with that. There are limitations, though, further on in the statute as to what authorities we have for pollutants or contaminants versus what we have for hazardous substances. Cost recovery is an example of a limitation on that.

Gene.

Senator SIMPSON. I only have 1 minute more, but if you could add to your 45-second response then, I was to add also whether you are finding with mining, is that contamination caused primarily by source rock and byproducts or by mining waste?

Mr. LUCERO. Senator, the one thing that I was going to respond to was that we received a favorable decision recently in the Globe, AZ, case which dealt with asbestos that had been mined and milled at that site. The court ruled in that case that those mining wastes were hazardous substances under the statute. That is the first such ruling in the country, but it makes it clear, in our opinion, that our interpretation that mining and milling wastes from mining activities around the country would be a hazardous substance.

We can, therefore, not only respond, we can respond in the clean-up or response sections of the statute either because it was a hazardous waste or a hazardous substance or a pollulant or contaminant. Now, we can also bring enforcement action under section 106 clearly, and we can also cost recover under section 107 for any action that the Superfund Program took.

We believe that that is the correct ruling and that it favors us. I would also point out that under section 7003 of RCRA we can take action where that solid waste presented an imminent and substantial endangerment.

The last part of your question, I would like to submit an analysis for the record, expecially since you are short on time. There are 17 sites on the NPL and they have been assessed and they do answer your question as to whether they are from source material or from mining waste. There is a breakdown, and we can submit that for the record.

Senator SIMPSON. Thank you. Thank you, Mr. Chairman. May I ask that the talk of Mr. Ruckelshaus be entered into the record?

Senator STAFFORD. Without objection, it will be.

Senator STAFFORD. The Chair is about to go to the remaining members. The Chair would remind his colleagues that we do have four more important witnesses here this morning representing four of the major States that are involved in problems with Superfund. I hope we can end these questions quickly enough to allow the four State witnesses to appear.

It would be the Chair's intention, and I am sure Mr. Thomas would cooperate if necessary, to ask Mr. Thomas to come back at some later time.

Mr. THOMAS. Certainly.

Senator STAFFORD. He could then complete further questioning and further testimony should that be necessary. By saying this, I am not attempting to restrict anybody to less than their 10 minutes.

Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman.

I do have a substantial number of questions for Mr. Thomas. I will limit them now. I don't want to ask that he come back just on my account, but I would like to get a few of them in anyway.

Let me just say, Mr. Thomas, to you and Mr. Barnes, that I think your answers to Senator Simpson's question inadvertently demonstrate the urgency of the victim compensation provision in the law. In response to that question, you have discussed the enormous diffi-

culty for the Environmental Protection Agency, one of the large agencies of the U.S. Government with 10,000 employees, a great many of them scientists, experts in the field, to establish causal relationship between toxic discharges and human injury and death.

If it is difficult for you to do it, how then is the ordinary citizen to do it? Just 2 weeks ago, we had sitting in those very chairs housewives, secretaries, factory workers, whose children contracted leukemia and died. They can't find a scientist who can get up and say it is that water supply in your neighborhood, but logic, common sense, and deductive reasoning all tell us very clearly that the incidence of leukemia and death among those families in that neighborhood were plainly the result of the water supply there. I think we have to view it in that context.

It is a difficult task, a very time-consuming and painful task, but put yourself in the shoes of a factory worker who, with an eighth grade education, confronted with this enormous problem and its human tragedy, and if you can't do it, then how is he to do it? That is what led a very distinguished panel made up of representatives of the American Bar Association, the American Law Institute, the Association of American Trial Lawyers, the Association of Attorneys General, and the Department of Justice, who were mandated by the Superfund law to study the problem of victim compensation, to conclude in their report, and I quote:

> Although causes of action do exist for some plaintiffs, under some circumstances, a private litigant faces substantial substantive and procedural barriers in an action to recover damages for personal injury or property damage due to hazardous wastes.

That is the conclusion that they reached. So, what we have is the empty form of the law, available nominally but not in a real sense to people who have no other place to turn and who suffer not only the incredible tragedy of seeing their children and their family members suffer and die, but also then the complicating tragedy of not having any place to turn.

Sure, it is a tough job, but you have to do it because nobody else can. That is the point.

I want to ask you first, are you familiar with the conclusions of that study?

Mr. BARNES. You are talking about the 301(e) study?

Senator MITCHELL. Yes.

Mr. BARNES. Yes, we are.

Senator MITCHELL. Do you have any basis upon which to dispute the conclusion of that study which I have just read?

Mr. BARNES. Senator, we have taken a look at that. That study points out several problems with trying to use the judicial process to remedy these problems including the statute of limitations, the difficulty of establishing the causal linkage, of identifying responsible parties, and points out one way that those lawyers thought that problem might be addressed.

I think one of the problems that, frankly, I think the Administrator reflected this in his testimony on the House side, is that, as you have indicated, the people that are faced with problems of a child with leukemia, you can't look at that and not have your heart beat and empathize very strongly with that. You have some people sitting next to a solid waste dump and have a child with

leukemia. You have somebody else sitting across town also with a child with leukemia. Frankly, I have trouble feeling any less for that factory worker that lives across town from that other individual.

I think, first, that the victim compensation issue is a very important issue for Congress and the society to step up to. I think it is critical that we look out and try to identify those people that are similarly situated. We have a lot of people out there who, through no fault of their own, are suffering from the most dreaded diseases of our lifetime.

Senator MITCHELL. Let me be specific because time is running out. Let me ask you, Mr. Thomas and Mr. Barnes, a direct question. Recently, an official of the Office of Management and Budget by the name of Michael Horowitz was quoted as saying that the Reagan administration is willing to spend political capital to stop victim compensation legislation and that the battle must be fought now. I ask you, does that reflect the position of the Reagan administration? Second, did you participate in the formulation of that policy? If the answer to both of those questions is no, then what is the policy of the administration with respect to victim compensation legislation?

Mr. BARNES. As to the first question, I don't believe that fairly represents the view of the administration at this point. The administration's position has been laid out in testimony, particularly on the House side, where we have raised some questions about the existing proposals. Second, I have been participating as the Agency's representative in the Cabinet council working groups where we have done a number of analytical papers addressing some of these issues, like the scientific issue. I would like, as I mentioned to Senator Simpson, to provide that piece to the committee because I think it can contribute to the debate.

And the third part of your question was?

Senator MITCHELL. What is your position on victim compensation? I have introduced two bills dealing with victim compensation, one, accepting the recommendations of the study commission and putting that in legislative language, the other, identical to the bill I introduced in 1981 after the Superfund law passed without it. Do you have a position with respect to either or both of those bills?

Mr. BARNES. We do not have a formal position on either of those bills at this time, Senator.

Senator MITCHELL. Could I ask that you submit to me your views on those bills as soon as possible; what the administration's views are on them?

Mr. BARNES. We would be glad to do that.

Senator MITCHELL. All right. In view of the time, Mr. Chairman, I will submit the remainder of my questions. I just want to add, Mr. Thomas, I commend you for the forthrightness and knowledge of your presentation today. You took office a year ago under difficult circumstances, although I told you at the time that you are like a guy sent up to bat to replace someone who struck out 100 times in a row with the bases loaded, so if you would just hit a foul ball the crowd would cheer.

You have done more than hit a foul ball; you have done very well. We commend you for it, and we encourage you to continue

your efforts. The same applies with respect to Mr. Hedeman and Mr. Lucero and Mr. Barnes.

I have a number of other questions, Mr. Chairman, which if you decide to get Mr. Thomas back, I would like to question him. If not, I will submit them in writing.

Senator STAFFORD. I would recommend they be submitted in writing, but new questions may occur as we go along which could justify the return of Mr. Thomas.

Senator Burdick.

Senator BURDICK. Thank you, Mr. Chairman. I will also be brief.

You stated that the responsible party could pay the cost recovery provided in this legislation. Who is the responsible party?

Mr. THOMAS. A responsible party is defined in the broad provisions of the statute as any owner, operator, transportor, or generator of waste at a particular site that we are investigating, both current as well as previous.

Senator BURDICK. Suppose that operator A has a plant that he sells to operator B in 1975, and they find that it is polluted. What liability is there on operator A?

Mr. THOMAS. Operator A continues to have the same liability as if he were continuing to operate.

Senator BURDICK. Is there no statute of limitations?

Mr. THOMAS. As far as these sites are concerned, no, sir.

Senator BURDICK. You can go back as many years as you wish?

Mr. THOMAS. As far as we can go back to find all responsible parties, that is, all parties who contributed to the problem at the site.

Senator BURDICK. Would you be joining several defendants in the case?

Mr. THOMAS. Our understanding and the interpretation of the courts has been that each one of them is jointly and severally liable for the harm at that site with some limitations.

Senator BURDICK. On this subject matter, there would be no applicable statute of limitations to bar any applications?

Mr. THOMAS. No, sir.

Senator BURDICK. What about the liability of cities, counties, villages, et cetera?

Mr. THOMAS. If they were an owner or an operator of a site, they are responsible party as well.

Senator BURDICK. Is that in the proposed legislation?

Mr. THOMAS. That is in the current law.

Senator BURDICK. Well, I think that helps some. Thank you.

Senator STAFFORD. Thank you, Senator Burdick.

Senator Moynihan.

Senator MOYNIHAN. Mr. Chairman, we can't have someone of Mr. Thomas' position before this committee without the Senator from New York asking him about the Love Canal. Where we begin with Superfund is in reference to that. It seems to me that keeping track of that is sort of keeping track of the program. That is where this program comes from.

What is the present state of the activity there and the technical review committee?

Mr. THOMAS. Senator, as you recall, I guess it was 4 or 5 months ago now when we got together and talked with you and Senator D'Amato and Mr. LaFalce about the progress that we laid out for

Love Canal. We basically are on that track as far as dealing with the issues at Love Canal. As a matter of fact, Mr. Nosenchuck, who is going to be on the panel after me and I were talking a little bit beforehand about where we were with one of those specific component projects, the sewers and creeks cleanup project that we anticipate moving forward with this year.

Senator MOYNIHAN. Did you say sewers and streets?

Mr. THOMAS. Creeks. Sorry about my accent.

Senator MOYNIHAN. Under the previous administration, you didn't have an accent.

Mr. THOMAS. That is correct.

At any rate, I think we are moving forward with those component parts of Love Canal project on the timeframe that we previously talked about. There is an issue that you know has been brought up concerning the further buy-out of nonresidential properties in Love Canal that we are researching as far as the legal issues are concerned. There are a number of legal issues there. We have not reached final conclusions on exactly what we can or cannot do as far as those nonresidential properties are concerned.

Other than that, I think the other issues that we talked about in the cleanup project and the further assessment of the scientific data is all pretty well on the timeframe we laid out.

Senator MOYNIHAN. Could I then ask you if you could give us a piece of paper on how that progress is going?

Mr. THOMAS. I would be pleased to, and I am sure Mr. Nosenchuck would join me in pulling that together from the State's point of view.

Senator MOYNIHAN. There is one little detail, the technical review committee which you have empaneled is meeting behind closed doors, and then you have information sessions which follow it. Can I ask if that is necessary or wouldn't it be more in the spirit in which you are running the EPA just to have the meeting open?

Mr. THOMAS. Senator, I am not fully familiar with that issue. Let me look into that issue and get back to you on that. I know that there are probably two or three different groups. One, we talked about and talked with you about a peer review group where we talked with the National Science Foundation about participation in that. Certainly, that would be a full review process.

We have a management group between State and regional personnel.

Senator MOYNIHAN. This is your Love Canal technical review committee.

Mr. THOMAS. OK. Let me look at that and see what that issue is. I will be glad to get back to you. We have, I know, an ongoing community involvement project, but let me look at that specific one and find out what the issue is.

Senator MOYNIHAN. I would just leave you with the thought that no one is going to understand the issues involved anyway. There is no possible reason for having them behind closed doors. The spirit in which you are running this agency so well would be complemented if you just let reporters and neighbors at the meetings.

Mr. THOMAS. Yes, sir. The only issues that I could think would possibly require that is, as you know, we have active litigation underway as far as Love Canal is concerned and part of our technical

support has to do with supporting that litigation. That is the only possible explanation I can think of, but let me look into that and get back to you.

Senator MOYNIHAN. Thank you, sir.

Senator STAFFORD. Thank you, Senator Moynihan.

Senator Baucus.

Senator BAUCUS. Thank you, Mr. Chairman.

Mr. THOMAS. If I could, Mr. Baucus, clarify one point that I made on the question from Mr. Burdick for the record, when he talked about the statute of limitations. There is the statute of limitation as far as cost recovery actions are concerned at particular sites. It is currently being debated whether that is a 3-year or 6-year statute of limitations, but that is one statute of limitations that is in the law that I wanted to be sure was on the record.

Senator BAUCUS. Thank you, Mr. Chairman.

Mr. Thomas, as you probably know, our Superfund legislation allows a State or a Federal agency to bring an action to try to recover costs from either the fund itself or from a company with respect to damages to natural resources. It is the natural resource provision of the bill. As you probably also know, there is a statute of limitations with respect to that provision of 3 years after the date of enactment of the law, December 11, 1980, which expired December 11, 1983.

The problem, as you probably know, is that there are many instances where States around the country, including the State of Montana, were put in a terrible dilemma, because the law further states that EPA, under section 112, will promulgate rules and regulations and forms and so forth, so that interested parties know how to bring an action under section 111, know how to identify the damages that have occurred, and so forth. As I understand it, EPA is to provide the funds to the Department of the Interior which is going to help develop these regulations.

My question is, if I am correct in my assumptions, why hasn't EPA done anything here? It has put some States in a big dilemma. The State of Montana filed a lawsuit the day before the deadline which asks EPA to come forth with these rules and regulations as the law asked them to. It was an action also against the company involved here which happened to be the Anaconda Minerals Co. for damages it has caused, but it was essentially an action to force the EPA to do what the State of Montana thinks the EPA should do. Other States are gambling. I think there are about 20 other States in this situation. Those other States have not filed actions because EPA has not filed the guidelines. They are hoping that even though there is the statute of limitations, maybe Congress is going to remedy this somehow and extend the statute of limitations.

My question to you is why hasn't EPA done what it should have done during this 3-year period in publishing the appropriate rules and regulations so that States and appropriate Federal agencies can file the claims that are required under the act.

Mr. THOMAS. Senator, the natural resource damage claim issue is certainly one that has been discussed quite a bit during the last several months. There are a number of issues associated with it. First, the issue of statute of limitations that you mentioned is the subject of litigation itself, that is, whether the statute of limitations

has or has not run out depending upon an interpretation of the law as to whether that statute started from the time of discovery or whether it started from some other time. I think that that issue as a part of litigation will be dealt with by the courts if not dealt with sooner by the Congress.

At any rate, the issue of whether a trustee, whether it under the act is a Federal agency or the Federal Government or whether it is a State, trustees of the natural resources could proceed to file claims or not was not dependent upon the Agency developing its regulations. They could do that. As a matter of fact, that has been done. The Federal Government, for instance, in a case filed a massive natural resource damage claim against a responsible party and has done that, and States could do that as trustees of the fund.

Clearly, the two regulations that would assist States in doing that are the one that was discussed, as you indicated, the Department of Interior would develop, and that is how to assess natural resource damages. Second, the regulations that EPA would develop, that is, if you have presented your claim to responsible parties and they have not been forthcoming with the funds, how you present your claim against the fund.

Both agencies currently have underway the development of those regulations. EPA has had them underway for a long time. The Department of Interior——

Senator BAUCUS. It has been 3 years, though.

Mr. THOMAS. That is correct, but let me talk about one other issue in the statute. That issue is that you limited the amount of funds that would be available for natural resource claims to 15 percent of the fund in a particular year.

Senator BAUCUS. Excuse me, but that is not the issue, how much funding is available. The question is why hasn't the Agency done what it should have done and when is it going to do what it should have done so that States know what to do? My information, correct me if I am wrong, is that the States had been denied claims because EPA has said that because regulations have not been issued——

Mr. THOMAS. That is not correct.

Senator BAUCUS. Well, the information that I have is that Colorado, Idaho, New Jersey, and South Dakota filed 57 claims for a total of $2.7 billion and EPA has denied all those claims and the stated reasons were that the EPA is unable to evaluate the claims' merits because the claims lacked sufficient factual description of injury which goes back to the plaintiff because the States did not know what to do because the regulations were not written.

Mr. THOMAS. The reason they were denied was because they did not meet the statutory test. That is, first, they hadn't fully assessed the damages so we couldn't determine what the claim was and, second, they hadn't presented the claim to the responsible parties and tried to recoup from them before they submitted them to us. You have to meet that test before we can consider them a valid claim. The claim wasn't denied; the claim was returned because they hadn't met the statutory test.

Senator BAUCUS. I don't want to debate here. The question is what is EPA going to do and when is this question going to be resolved?

Mr. THOMAS. First, EPA is actively supporting a response to the Montana law suit. That is one thing we are doing in trying to come to grips with that. From a regulatory point of view, we are moving to try to get our regulations out as to how you make a claim against the fund. We are working to support the Department of Interior and we do provide funds to the Department of Interior for their fund. We are working to support them and try to help them as they develop their assessment criteria regulation. The third thing is we are making it clear to States as well as Federal agencies, both trustees, that they can proceed to deal with natural resources to a certain extent in the context of cleanup. We deal with natural resources in cleanup in every cleanup.

As you know, we deal with threats to public health and the environment as far as our cleanup programs are concerned. A major component of cleanups is dealing with natural resources such as ground water contamination, et cetera.

Senator BAUCUS. That helps. Could you tell us by what date you expect these regulations to be in effect?

Mr. HEDEMAN. In terms of the claims regulations, I would anticipate the proposal sometime in the early summer.

In terms of the Department of Interior's regulations, one of the problems that we encountered, frankly, is that the responsibility in the statute that I believe is in title III of the statute we have a dilemma in that we are unable to fund money out of the trust fund for anything other than title I activities.

Senator BAUCUS. Excuse me?

Mr. HEDEMAN. For anything other than activities specified in title I. This is a technical point, but the bottom line of it is that we have not been able to give the Interior Department money to promulgate those regulations to do damage assessment.

Senator BAUCUS. There is a legal impediment? Do you need statutory revision?

Mr. HEDEMAN. The Department of Interior, notwithstanding that, has, to the best of my knowledge, included in its budget a request for money that would be appropriated out of the Treasury to do that, and I am not familiar with the status of that.

Senator BAUCUS. But it is your understanding that funds will be made available one way or another.

Mr. HEDEMAN. I would not like to represent that, frankly. I don't know where it is in the budget this year.

Senator BAUCUS. Would you follow up on that and let the committee know what is being done so we can keep that moving along?

Mr. HEDEMAN. Certainly.

Mr. THOMAS. Senator, let me respond also back to what the bottom line issue is on claims against the fund, and that is that if, in fact, everybody had gone along and had everything in place and had submitted claims this year, we would have had a maximum available of about $60 million under the provisions that we have in the statute that we could have made available for natural resource damage claims. I would have been put in the position of determining was I going to use that $60 million to reimburse these States for claims for natural resource damages or use the $60 million for cleaning up more sites.

I will tell you, I would have used it for cleaning up more sites. That is the dilemma that I have; first, how much money is available under the fund for natural resource claims, and two, the balance against cleanup of sites versus restoration of claims for natural resource damage.

Senator BAUCUS. I hear what you are saying, but I suggest that you face that directly and up front and not indirectly by not issuing the regulations. That is more honest, it is more above board, more direct, and then you resolve that issue when we have to at that point.

Mr. THOMAS. Certainly. I might also mention that not in the natural resource area but in the response claims area—both of them are covered under claims provisions—there has been an active claims process underway on a case-by-case basis regardless of the fact that the full regs were not there and slowed people down for making claims against the fund.

Senator STAFFORD. I would say to the gentleman that he has now consumed slightly over 10 minutes.

Senator BAUCUS. If I have consumed my time, thank you, Mr. Chairman.

Senator STAFFORD. The Chair has concluded, and I will share this with my colleagues, that normally the most advantageous next move for the country, for EPA, and for this committee would be to ask Mr. Thomas and his colleagues to come back again rather than try to have a second round now since we would thereby disaccommodate four people from out of State and the people who have come with them. So, I would ask, Mr. Thomas, if you would try to clear either May 16 or May 22 to return and we will resume questioning then instead of submitting questions in writing for all those questions that the members might wish to put to you. Would that be agreeable?

Mr. THOMAS. Certainly.

Senator STAFFORD. All right. Let me say again we appreciate your appearance here. I think it has contributed a great deal to the understanding of this committee of your problems. We hope that our questions have indicated to you some of our problems, one of which is going to be expediting as much information to us as you can.

We thank you very much, and we will see you in about 2 or 3 weeks.

Mr. THOMAS. Thank you, Senator.

Senator STAFFORD. At this point, we will ask the panel to come forward. Mr. Norman Nosenchuck of New York, Mr. Joel Moskowitz of California, Mr. Wilhelm of Ohio, and Mr. Tyler of New Jersey.

Gentleman, thank you for being here. We have found in the years we have been on this committee that if you schedule one panel, often a few members may show up and you are through at 11. If you schedule two panels and a lot of members, which we much prefer, show up and have a lot of questions, you are overscheduled, so we never seem to quite hit the happy medium. We apologize for keeping you waiting this long.

Senator Moynihan, one of the witnesses is Mr. Nosenchuck who is director of the division of solid hazardous waste in the depart-

ment of environmental conservation in Albany. We would appreciate it and I am sure he would if you would say a word and introduce him to us.

Senator MOYNIHAN. I would very much like to do that. He is here, Mr. Chairman, speaking for the profession, you might say, which he represents so well. We are very proud of him in New York. I cannot but take the opportunity to recall that he was one of those who was more than a little instrumental in bringing about the various salutory changes that we have observed in the administration of Mr. Thomas as compared to his predecessors. He wouldn't say that himself so I will say it for him.

We welcome you, sir.

Senator STAFFORD. I think we will begin, Mr. Nosenchuck, with you.

STATEMENT OF NORMAN NOSENCHUCK, DIRECTOR, DIVISION OF SOLID/HAZARDOUS WASTE, DEPARTMENT OF ENVIRONMENTAL CONSERVATION, STATE OF NEW YORK

Mr. NOSENCHUCK. Thank you and good morning, Mr. Chairman and members of the committee, Senator Moynihan. I value the opportunity to be here today to duscuss why CERCLA must be extended and extended now.

I am responsible for the hazarous and nonhazardous sclid waste regulatory program in New York State including CERCLA related remedial activities for inactive hazardous waste sites. I am also the chairman of the superfund committee of the Association of State and Territorial Solid Waste Management Officials.

ASTSWMO recently prepared a report for the U.S. Environmental Protection Agency and the ASTSWMO membership entitled "State Cleanup Programs for Hazardous Substance Sites and Spills." With your permission, Mr. Chairman, I will submit the key findings of this report as part of my testimony.

Senator STAFFORD. Without objection, we will place it in the record, and we will place your entire statement in the record. If you could summarize it, we would appreciate that.

Mr. NOSENCHUCK. Yes, sir; I shall do that.

The summary that I would like to make is that there are many more sites out there than we have ever estimated before. In New York State, we prepared and we submitted a draft State inactive hazardous waste site remedial plan to our State superfund management board. This draft report outlines our State's plan to deal with the State's 895 known or suspected hazardous waste sites. Also, Mr. Chairman, with your approval, I would like to submit for the record this draft plan (see p. 142) along with appendix A [1] which addresses New York State's hazardous waste sites program, appendix B [1] which is the inactive hazardous waste disposal sites annual report, and appendix C [1] which are the fiscal aspects of the State's superfund program.

Senator STAFFORD. Without objection.

Mr. NOSENCHUCK. Thank you, Mr. Chairman.

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[1] Retained in committee files.

The draft report lays out an estimate of the State's hazardous waste sites cleanup needs, and in this report, we have identified and we have estimated that nearly 300 of the sites will require substantial remedial measures to contain or eliminate chemicals that threaten the public health or the environment.

Using numerous assumptions, the plan estimates the total cost for this remedial work at about $1.88 billion in 1983 dollars for the 183 actual sites. This assumes an average cost of only $6.64 million per site for remedial action. This figure that we are using is probably on the low side.

The bulk of this construction cost we would hope would be paid for by the responsible parties, about $1.17 billion, and another portion would be paid by the Federal Superfund Program, about $284 million based on the current eligibilities. Needless to say, there is no money in the cercla program now for these remedial activities. The cercla program, in my judgment, is pretty close to being bankrupt. We will have to pay using New York State funds about another $500 million to carry out the State portion of this remedial construction work plus the other State program obligations. This assumes that cercla will be extended and will at least provide the $284 million I just mentioned.

As we obtain more and better site information, we will be reviewing these costs. As I said earlier, there is a very good chance that the costs will go up and probably will go up considerably. This also reflects what is happening nationally. EPA itself had made an initial estimate of about $6 million per site for remediation, but those figures, as I understand it, are now going up to an average cost of about $9 million per site and continue to go up. That happens to be the real world.

The magnitude of the program to clean up abandoned hazardous waste sites across New York State is far greater than originally estimated. We have a New York State superfund program, we have a waste end tax in place, and our funding structure has not produced enough revenues. We are evaluating this and will be coming out with a report by the end of May which will consider appropriate legislative amendments and remedies to increase our revenues for our State superfund program. Clearly, we are not collecting enough money under our waste end tax, and we are exploring various and sundry remedies to increase our revenues.

We have, in New York, developed a very careful approach to addressing the entire problem. We conduct what we call phase I site investigations where we provide preliminary characterizations of hazardous substances present at each site. We look at all the pathways by which the pollutants might be migrating away from the original site of disposal. We identify the population or resources that might be affected by the pollutants from the site, and we observe how the disposal area was used or operated. We gather information regarding who might be responsible.

Under our phase I there is no on-site actual work; it is really a collection of existing data. Each phase I investigation costs us about $3,000 per investigation. If more information is needed, we go into a phase II site investigation, again basically with State funds. We order this when the phase I results suggest that a significant threat to the environment may exist. These investigations are

intended to confirm or disprove the suggestiong of a significant environmental threat. However, these investigations are not sufficiently detailed to determine the full extent of the contamination to evaluate the remedial alternatives or prepare a conceptual design for construction.

After we do our phase II investigation, we have enough information to do a hazard ranking system score. Using that particular score, if it is 28.5, or more, then we submit candidate sites to the Federal Government for inclusion on the national priorities list.

The current status of our program in New York State is, as follows: We have 29 sites on the current NPL list, we have signed and executed 10 cooperative agreements with EPA, we have completed 200 phase I studies using State funds in 1983, and we have also asked EPA to conduct approximately 125 phase I studies which they have done in addition to the ones that we have done. Those are the types of studies that Lee Thomas previously referred to. They are a very preliminary evaluation.

We have projected using State funds to do another 100 additional phase II studies in 1984. The cost of our phase II studies average between $30,000 and $35,000 per study, so we will be committing in this area $3 or $3.5 million of State funds just for this activity alone.

Earlier this month, just before April 15, we sent an additional 55 candidate sites to the EPA for inclusion on the national priorities list. This is very interesting because I heard Mr. Thomas say earlier that he only expected to increase the list by 100 or 150 sites. Each one of these sites received a score of over 28.5. I know there is no money in the fund to address all the activities needed at those sites. That is why I said, in my judgment, the fund is essentially bankrupt, because you have to plan and project ahead and the fund doesn't contain any money for remedial activities at any of these 55 candidate sites.

We also have in New York some 50 to 60 sites currently under remediation with an estimated construction cost of about $90 million excluding the costs at the Love Canal which are, as you well know, considerable. Under a community right to know State executive order we are currently surveying thousands of generators and transporters to find out what their past disposal practices have been since about 1952. We expect to obtain additional information on inactive hazardous waste sites and undoubtedly will be listing more sites in New York in addition to our 895. That work is ongoing.

The basic concern that we have in New York is how many years and how many dollars will it take to accomplish a full cleanup of all the inactive hazardous waste sites needing response. The estimates vary. You have heard several from EPA, but we are talking about decades and we are talking about billions of dollars nationally. Where will the money come from? I don't think anybody is seriously disagreeing that CERCLA must be extended and must be expanded. The question is when should it happen and how much money should go in initially.

I am not looking now at the total cost and the total program, but I say let's approach this thing incrementally and let's move ahead initially for at least a 5-year extension and at least an additional $9

billion to the response trust fund. The best way to obtain that amount of money, to have it come in equitably and properly, I think, is by an expanded front-end tax system. I know that various groups are looking at that. We are taking a very hard look at different types of revenue mechanisms in New York State.

Senator MOYNIHAN. Mr. Chairman, can I interrupt for a moment? Did you say front-end?

Mr. NOSENCHUCK. Yes, sir. Front-end tax is like feedstocks, but moving the tax a little bit further down into the manufacturing chain. These front-end taxes are distributed very well and collected very easily in our judgment. They are relatively simple to collect. When you go to a national waste-end tax operation, you are looking at a tremendous administrative burden. I don't think a waste-end tax will collect the amount of money needed at the national level. I have seen some discouraging reports on waste-end tax systems.

In New York, as I said, we are looking very carefully and with considerable detailed analysis of what we could be doing to collect additional revenues for our program. If you would so desire it, Mr. Chairman, after we complete that report and submit it to the Governor and legislature, I would be more than pleased to send you a copy.

Senator STAFFORD. We would be appreciative if you would do that.

Mr. NOSENCHUCK. I will do that.

In addition to these costs for these program activities that we have talked about, a lot of people don't understand that the Federal Government currently does not provide any funds to the States prior to the execution of a State cooperative agreement where the State takes the lead or prior to the execution of a State Superfund contract where the Federal Government takes the lead. You heard me explain some of the costs involved in those activities and they are considerable.

I think it is critical and essential that this support be provided to the States and it must be provided through CERCLA. Additionally, when we go into enforcement activities or long-term monitoring programs, there is no support from the Federal Government in this area. As far as any enforcement actions are concerned, right now CERCLA the support to the States is zero. EPA recently moved up support for monitoring from 6 months to 12 months and these activities usually go on at least 30 years. I think that is another area that is critical to provide funds for, to assist the States.

Another area, I think, is to avoid these remediation problems in the future. In my statement, I explain why I think CERCLA should assist the States in this area. I know that there has not been, in my judgment, an adequate recognition at the national level of what it is going to cost the States to put into place good hazardous waste management programs that will prevent the problems of the past from occurring in the future. That is why I suggested a waste-end tax for that purpose, a rather small one, for $400 million to the States in 5 years which isn't the total cost of the national RCRA hazardous waste management program by a long shot.

If we as a Nation are sincere about cleaning up the problems of the past, the remediation of inactive hazardous waste sites, we

must recognize that it will take time, it will take money, and it will take resources. The problem is enormous. We all know that. The States need fiscal help from CERCLA to assist them in remediating the inactive hazardous waste sites within their borders. We look to the Congress for assistance. Help us by extending and expanding CERCLA now so that the Superfund program will truly meet the expectations and needs of the American people.

Thank you.

Senator STAFFORD. Thank you very much, sir.

Senator Lautenberg, would you care to introduce the gentleman from New Jersey?

Senator LAUTENBERG. I would like to welcome Mr. Tyler. He is the assistant commissioner of our Department of Environmental Protection. He has been very instrumental in developing a number of the programs that New Jersey is proud to have initiated, and I welcome him here from my home State.

STATEMENT OF GEORGE TYLER, ASSISTANT COMMISSIONER, ENVIRONMENTAL MANAGEMENT AND CONTROL, DEPARTMENT OF ENVIRONMENTAL PROTECTION, STATE OF NEW JERSEY

Mr. TYLER. Thank you, Senator Lautenberg. Thank you, Mr. Chairman. My name is George Tyler. I am Assistant Commissioner of the New Jersey Department of Environmental Protection. I will briefly summarize my testimony which has been submitted to you for the record.

I would like to thank you for the opportunity to be here today. I would like to note it is a little unusual for me to be here because our Governor wants to and expects to be before you at your next hearing on this issue because he feels so strongly about the reauthorization of CERCLA at this time.

I would like to make two points with my testimony. One is that we support legislation, quickly reauthorize CERCLA, with an increased funding level, and urge the Congress to do so as quickly as possible. We think the national program that Lee Thomas described for us this morning will slow down dramatically in October, at the start of the new fiscal year, because of budget constraints unless it is reauthorized now.

New Jersey estimates that it will need about $108 million in Federal dollars alone for fiscal year 1985. That is starting October 1, 1984. If that funding is not available, more than 50 active projects now underway in the State will come to a virtual halt.

The second point I want to make, which has been discussed, is that if CERCLA is not reauthorized immediately, then we would urge the Congress to quickly approve the RCRA amendment that Senators Lautenberg and Bradley are considering, which would provide a mechanism to permit State programs to continue in the absence of Federal dollars. Under those amendments, States would be able to use their own moneys and receive credit to be used for work at other hazardous waste sites whenever Federal funding is again available.

In fact, New Jersey, recognizing that CERCLA amendments will take, at best, some time to enact would support that proposal as a parallel legislative effort. In other words, if you think CERCLA is

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going to be reauthorized in September or October during this year, we would still support those RCRA amendments as an important insurance policy.

I would like to note that by the end of fiscal year 1984, by September 30, in New Jersey we will have underway or completed 39 feasibility studies, 16 design projects, and 17 construction or immediate removal projects. That activity will generate, as I said, a need for $109 million during fiscal year 1985 to keep those projects moving and to stay on schedule. In addition, we are now estimating that we will need at least $124 million in fiscal year 1986.

For your information and for the record, we have provided you with a detailed program status report of New Jersey's program which was prepared for our recent hearings before our State joint appropriations committee. We have also provided you with a copy of our comprehensive management plan which in part, addresses the top 120 sites in our State.

I could go on at some length on the many points that ASTSWMO and New Jersey and the National Governors Association have sought to see included in any CERCLA amendments. I think our prepared testimony amply covers them. I will simply state that I think that the key issue for this committee is the timing of the reauthorization. If EPA's charts, and I should preface anything that might sound as a criticism of EPA by saying that I endorse all of the compliments for Lee Thomas and his staff that I heard this morning. EPA is moving aggressively to implement Superfund. We went to them with budget problems 6 months ago that threatened many of our ongoing Superfund projects. EPA, did indeed go to great lengths to find money to keep our program moving. However, I just don't think, at this point in time, that they have that kind of money available. I don't think they can keep all of the cleanup projects now underway moving in fiscal 1985. I think if you add up New Jersey's needs with what Norm Nosenchuck has just set forth as New York needs, you already are beyond the national budget for fiscal year 1985 and that only considers two States.

The charts that Mr. Thomas set forth for us show numbers of sites versus time. If you put dollars on the vertical axis instead of numbers of sites, I think you will see the shortfall that we expect in fiscal year 1985. I don't think EPA can afford a gap for a few months of that year without reauthorization. They are not going to be able to sign contracts or hire staff or sign cooperative agreements unless they know that money is in place.

With that, I will be happy to answer any questions you may have.

Thank you.

Senator STAFFORD. Thank you, Mr. Tyler.

The final witness this morning will be Mr. Charles Wilhelm. He is chief of the division of hazardous materials management with the Ohio Environmental Protection Agency and speaking on behalf of the Association of State and Territorial Solid Waste Management Officials.

We welcome you here, Mr. Wilhelm. We have no member from Ohio on our committee. If you will accept me as the one to introduce you, even though I went to the University of Michigan, I will perform that function.

STATEMENT OF CHARLES WILHELM, CHIEF, DIVISION OF HAZARDOUS MATERIALS MANAGEMENT, ENVIRONMENTAL PROTECTION AGENCY, STATE OF OHIO, REPRESENTING THE ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

Mr. WILHELM. Despite that fact, Mr. Chairman, it is still a pleasure to be here today.

Chairman Stafford and members of the committee, I am Charles Wilhelm. I am chairman of the Association of State and Territorial Solid Waste Management Officials Task Force on the Reauthorization of CERCLA. I am also the chief of the division of hazardous materials management of the Ohio Environmental Protection Agency. Like my colleagues here, I appreciate the opportunity that you extended to me, Mr. Chairman, on behalf of the Senate Committee on Environment and Public Works to present ASTSWMO's task force proposed changes to strengthen CERCLA during your 1984, and I would emphasize, during your 1984 legislative session. I would also add, and I think you probably already know this, that ASTSWMO is an association of the 50 State solid waste program directors and includes the territories also.

You may know that on November 1 of last year, the association was invited by the U.S. House of Representatives, Chairman James Florio, to present testimony concerning "the strengths and weaknesses of the present act, suggestions for legislative changes, and what is the proper role of the States in the Superfund area." Subsequent to this request from Congressman Florio, we moved quickly at ASTSWMO to establish a CERCLA reauthorization task force to solicit the views of all 50 States, our member States at large. On November 10, on behalf of ASTSWMO, I presented our position paper, a preliminary one, to the House Subcommittee on Commerce, Transportation and Tourism. This testimony was based at that point in time on a survey of 11 States.

Our task force has subsequently had the opportunity to have three additional working sessions and we have now received survey results back from all 50 States and territories. I would like to emphasize that all 50 States and territories have participated in the process.

The ASTSWMO position paper that I have presented to you or you have before you today reflects these survey results from the 50 States and territories and our task force working sessions. These sessions were closely coordinated with the National Governors Association's Energy and Environment Committee. Again, the ASTSWMO position paper that I am presenting today, I presented to the NGA Energy and Environment Committee staff at their January 20 meeting in Denver.

I believe that this coordinated effort, NGA and ASTSWMO, is reflected in the fact that our respective position papers are in substantial agreement. .

ASTSWMO strongly supports the reauthorization and strengthening of CERCLA during 1984 as outlined in the position paper that I have submitted to you. These ASTSWMO positions cover recommendations for substantive amendments to CERCLA in the following 12 areas:

Reauthorization and expansion of the trust fund; State program support; 50 percent State match; operation and maintenance costs; State funds; How clean is clean issue?; State match credit; recommendations on the petroleum exclusion; health studies; the hazard ranking system; immediate removals; and time limit on claims.

Again, because of time constraints, Mr. Chairman, I commend the details of these 12 positions to you and your staff as you commence the markup process of this bill. For now, what I would like to do is highlight two of the examples that you have before you today.

First, the reauthorization and expansion of the trust fund. The States believe the problem is understood well enough to move forward now in 1984 to reauthorize CERCLA. For example, our substantive recommendations of the association are that the hazardous substance response trust fund must be reauthorized for at least 5 years.

We also believe the amount of the fund should be increased to at least $9 billion plus an increment for operation and maintenance costs as outlined in the paper that you have before you so that it can address the sites on the national priority list, proposed sites, and new sites yet to be proposed, as well as administrative costs to both the EPA and the States in carrying out cleanup actions.

We also believe that the fund must be based on a stable funding source.

The second point that I would like to give you a little more information on before I conclude has to do with State program support. Here I would mention that the States are ready, willing, and we believe, able to work with the U.S. EPA to expedite the cleanup process. The States believe that the recommendation I am about to outline is a vehicle, a legislative vehicle, that can be utilized by the Senate and the House to help us achieve that objective of expediting cleanup.

For example, we believe that funds should be made available from the trust fund to the States for program grants, perhaps 90/10, as your other match requirements are, or some other funding mechanism to support the following activities, all of which would greatly assist the States in expediting cleanup action:

First, support efforts to identify, assess, and investigate new sites; second, to develop, implement, and maintain State contingency plans; third, provide additional staff for administration of a State program and State lead projects; fourth, support State health study efforts conducted in concert with or at the request of the Department of Health and Human Services; and fifth, support State enforcement activities at national priority list sites. Norm referred to that during his testimony.

We believe that funds for staff support must be provided for up front and separate from site specific cooperative agreements.

We believe that the Superfund Program can be expanded now and that the cleanup process can be expedited now through the suggestions that all 50 States and territories are making here today to you.

ASTSWMO again commends the details of our position paper including all 12 points that you have before you today to you and your committee staff as you deliberate on the reauthorization of

this exceedingly important legislation in 1984. It is our hope that, since all 50 States have endorsed this, that all 12 of these State recommendations will be incorporated in your Senate version of the Superfund reauthorization bill on which you commence markup in May 1984.

Mr. Chairman, the States need your help and they need it now in 1984. All of us appreciate the invitation to appear here before you and the opportunity to present this paper. All three of us are available for any questions you may have.

Thank you.

Senator STAFFORD. Thank you very much, Mr. Wilhelm. We will make all of the position paper a part of the record.

I am sure that our regretable running over on time has deprived us of a number of members who otherwise would have been here. That was one of those planning things that just happened, which, as chairman, I apologize for.

Mr. WILHELM. Mr. Chairman, if I could, it doesn't have anything to do with the fact that you knew I was from Ohio and you are a University of Michigan grad, does it, sir?

Senator STAFFORD. Just the law school that I actually attended, so no.

Mr. Nosenchuck.

Mr. NOSENCHUCK. Mr. Chairman, in my remarks, I was going to say something that I had not included in my statement about the Federal hazard ranking system. I don't know how well known it is, but not all public health considerations are reflected in the EPA hazard ranking score that is utilized for the national priority list, for example, direct human contact, documented complaints of taste or odor problems or illness, and level of duration of exposure are not taken into account by EPA when they compute their hazard ranking system scores.

In our judgment, before sites can be scored for further action on the basis of public health impacts, a system which compensates for these and the other deficiencies in the Federal hazard ranking system must be developed.

Senator STAFFORD. Thank you.

I am going to ask you each to comment briefly on just one question and submit three others for response in writing, if that is agreeable.

This question is as follows: Could each of you identify what, in your opinion, are the three worst flaws in the current Superfund law and explain what problems they create and how they might be eliminated on the basis of your State experience.

We will take an answer now if you want or in writing if you prefer to do it that way.

Mr. NOSENCHUCK. If I might just answer part of it and, with your indulgence, I would like to answer the other part in writing. I have thought about this, and one of the real concerns that I have, and I have been in this program for a long time, is that the program since the beginning has moved ahead rather slowly since it became law in 1980. Too much depends upon EPA policy and EPA's interpretation of congressional intent.

For instance, it was not until not too long ago that EPA would not totally fund remedial investigation/feasibility studies. They

were generally being funding before last spring at a 90-percent Federal, 10-percent State match ratio. Now, due to the State pressures, they are totally funded without a State match requirement. This was an EPA policy switch.

Up front program support to States and support for State enforcement and monitoring activities is needed. I have a great deal of respect for Mr. Ruckelshaus and Mr. Lee Thomas. However, too much depends on the whims and policies of the administration. I think that the Congress must sent a clear signal that it wants to move this program ahead and support these State efforts in this program. CERCLA must be made clear in this regard.

In my dealings on those two task forces that you heard mentioned earlier by Mr. Thomas, those are the ones that I have my ASTSWMO Superfund committee members on and I am participating in. In some of the areas when we have a discussion with EPA, they say, well, we can't do this because there is no legislative history or it is not clear. We would like to do it, but—It is that, "but" that always gets me. By forcing a change in policy we have gotten some things from EPA, but these are policies which are just like the wind. It goes in this direction today and that direction tomorrow or might stop the day after. That is why, in my opinion, the Congress must send a clear signal, not only to the administration, whichever administration might be around, but to the people and to the States on what direction you intend to go. If you are really serious about it, we have to amend CERCLA and give this clear signal and support the efforts of the States.

Senator STAFFORD. Thank you.

Mr. Wilhelm, do you have a comment?

Mr. WILHELM. Mr. Chairman, I will submit a response to your question later. I would add at this point that the one item in our testimony that I would emphasize on behalf of Ohio and ASTSWMO that I think would do the most for all the States and expedite the cleanup process is our site fund reauthorization and expansion, as item 2 that I mentioned, State program support.

The States clearly need some kind of a granting, program granting mechanism, to cover the areas I outlined earlier to give them the administrative vehicle to work with U.S. EPA to expedite the cleanup process.

Senator STAFFORD. Thank you.

Mr. Tyler.

Mr. TYLER. Mr. Chairman, if I could be shortsighted in answering at this point, I think the short-term issue is the dollars. There are not enough available dollars to keep the projects moving that are now underway and that has to be resolved and resolved quickly. That is why we support rapid reauthorization, and that is why we supported Senator Lautenberg's proposal for a credit under cooperative agreements. I think that is extremely important. I cannot emphasize that enough.

There are lots of problems, as you have heard, in carrying out the law and we will be glad to respond to your question in writing and to articulate those.

Senator STAFFORD. Thank you very much.

There will be other members who will have questions in writing, I am sure.

Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

The testimony, although summarized, unfairly I think, because there is a lot of good material in there, nevertheless is there and it is on the record. I had a chance to read it and others will. I have a lot of interest in what you have to say. You represent and important professional point of view, and the fact that you come from a variety of States, the 50 members of ASTSWMO, matters an awful lot in terms of what you have said and what you are presenting.

I would like you to respond to the following, Mr. Wilhelm. This is the question of further study before EPA joins in supporting the reauthorization effort. I think you said that further study is unnecessary or that there is sufficient material on hand now to go ahead and reauthorize. Would you comment on that?

Mr. WILHELM. Yes, Senator. I would say that the association, under a grant from the U.S. EPA, the products for which were completed in late December 1983, engaged in a substantial study of the Superfund program in all the States. I think that we, as State program managers, now have some very good baseline data on the nature and extent of the problem. It was this study, as well as our national survey and task force work done in conjunction with all the States, that led to the development of these very specific recommendations that the people who have hands-on experience in the States, the program directors in the States, have come up with these very specific recommendations for substantial amendments to CERCLA to strengthen CERCLA.

We believe that the data base exists to support the proposed changes that we are making. We are not saying that in given areas, maybe, additional study may not be necessary, but we feel that given the gravity of the problem and the evidence that is currently available, we know enough at this point in time to move forward with substantial, supportable amendments to CERCLA to strengthen it it to enable us to do our job this point in time.

Have I responded to your question, Senator?

Senator LAUTENBERG. Yes, you have.

This information has been available to EPA?

Mr. WILHELM. This information, and I would ask Norm to speak to this also, this was done under contract with U.S. EPA. It was submitted to the U.S. EPA at the end of December. U.S. EPA, as does the House, has the benefits of our survey work also, in addition to this contract work that was done with U.S. EPA.

Senator STAFFORD. The Chair would intend, there being no objection, to obtain a copy of that survey study and to make it a part of the record by reference.

Mr. WILHELM. Certainly.

Senator LAUTENBERG. Therefore, EPA has had the opportunity to review the study they commissioned you, to do. Am I correct?

Mr. WILHELM. The association, Senator, yes.

Senator LAUTENBERG. OK. Then, why is there a question of whether there is enough information, at least to proceed with reauthorization? There has been no resistance that I have heard from the Administrator on down, to saying that this fund has to be expanded substantially. No one has said that that is not the case, that $3.2 billion is enough. Certainly, everyone agrees that that is

not enough to do even the basic job required of the type necessary to help our citizens.

Can you offer a reason as to why the administration thinks that more study has to be done, if this commissioned study has been developed and the recommendations made—other than the funding mechanism which is a complicated issue. It doesn't look like it needs a lot more study. What is necessary to get their support for reauthorization?

Mr. WILHELM. Mr. Chairman, Senator Lautenberg, I would not want to comment on what is motivating the U.S. EPA. I would merely say that the States believe, unanimously, that we have studies the problem and that given the gravity of the issues that we are dealing with, we now know enough to recommend substantial amendments during 1984 to CERCLA so that we can, as State program directors, get on with the job of addressing the serious problems that we have to deal with. That does not mean that there may not be components of the bill or of the program here or there that you don't engage in a continual ongoing evaluation and assessment of. However, we feel that there is enough known at this point in time to move forward with these reauthorization amendments and it would aid the States in addressing these problems if you were to do so.

Senator LAUTENBERG. OK. The question is not intended to malign either the efforts or the intent of EPA. I think we see a very positive attitude developing there. There has been an upgrading of geometric proportions in terms of the activity, the organization coming out of EPA, and we are all appreciative of that. I just want to encourage them, by whatever means we can, to support reauthorization and not to wait until December or some later date. I want to give the States, yours and the State of New Jersey, and the others who are anxious to move ahead, a framework for planning as well as a means of funding that says, OK, go ahead. If we can get a State credit established, incorporating the controls outlined by Mr. Thomas; we should be able to move forward.

This ought to be an organizated effort. You don't go ahead and commit the Federal Government willy-nilly to a lot of programs that will have to be paid for later on without mutual agreements. We want to use the criteria which have been established, but we also want to get on with this job. I encourage you, again, with your unanimity among 50 members, which is pretty persuasive for those of us who have to make the decisions, to know, that you have support in the Congress because every State has a threatened community. We know the States want to move ahead now.

The last thing that I would like your view on, I don't remember your list of 12 top priorities precisely, Mr. Wilhelm, is the issue of preemption. While the preemption issue is relatively uncomplicated for us here in the Senate, it has become a critical matter in New Jersey. We are not taking away the Federal Government's right to do what through legislation it must do, but we must be sure not to preclude or preempt the States from going ahead and attacking the same sites that are still abandoned and present a significant threat to public health.

Does anybody here disagree with that?

Mr. WILHELM. Mr. Chairman, Senator Lautenberg, one of the recommendations that I just summarily referenced has to do with State funds and the specific language is just one sentence, so I can read it to you very quickly. It has to do with State funds, and the Association of 50 States and the territories believe "The preemptive language of section 114(c) should be removed." This would allow the States programs such as New York and New Jersey.

Mr. Chairman, if I could I would just add that ASTSWMO, the States, are willing to work with you, Mr. Chairman, and the Senators and the staff to assist in any bill that you might be interested in marking up to aid the process.

Senator STAFFORD. We appreciate that very much. Do you wish to comment further?

Mr. NOSENCHUCK. Yes, sir. Senator Lautenberg, in response to your question to Chuck Wilhelm, when we did this work, we did it working with EPA and we did this work under our ASTSWMO Superfund committee. EPA is totally aware of our findings, and they know what the findings are. There is no question about that.

The reason that I mentioned earlier that in my judgment CERCLA is essentially bankrupt is because we have to plan ahead. You don't push a button and line up a program. In New York State, we are faced with some major decisions because we have evaluated the extent of the problem. Our initial cost figure is roughly $2 billion, which I really think is on the low side. We are estimating that we need some $300 million of Federal funds, and $500 million of State funds, and the $300 million of Federal funds is really not there now.

The State funds needed are based on the current CERCLA eligibility criteria. I think it is critical, as we address what we are going to do in New York and as each individual State addresses what they are going to do, that we must have direction from the U.S. Congress. We must know what the national long-term cleanup plan is, what is the thinking, because we are going to be faced with some major decisions in our State and in every State. How are we going to provide the money that is needed to clean up this particular problem?

Hazardous wastes, by law, are considered interstate commerce. They go all around the Nation. Earlier, one of the Senators mentioned that he thought it was a good idea if every State would provide for their own site to store the wastes or treat the wastes, or incinerate the wastes resulting from CERCLA remedial activities. I personally support that idea. Considerable knowledge and information concerning the extent of the national needs is available. The needs are enormous. And, in my judgment, we still don't have a total handle yet on all the national sites needing response and the total national cost.

One of the real questions you address at each particular site needing remediation, and you do this on a site-specific basis, is that you look at the geology, the hydrology, the type of waste, and you ask, how clean are you going to clean up this site, to what level of cleanliness are you going to bring it or to what level of dirtiness are you going to leave it? The costs that I have mentiond are just estimates that we are using for future remedial activities. These are the activities that we all know are going to cost a great deal of

money. If we are going to plan effectively for this clean-up effort as a nation, as a group of States, we must have something in place now. As we look down the road, there just isn't any money in CERCLA for this effort, and that is why I say the fund is essentially bankrupt.

Senator STAFFORD. Gentlemen, thank you very much. You have been very helpful to us, and we appreciate your coming here and the trouble you have gone to to be with us.

Mr. WILHELM. Senator, on behalf of the States, we certainly appreciate the opportunity.

Senator STAFFORD. Thank you.

The committee will now stand adjourned.

[Whereupon, at 1:12 p.m., the committee recessed, to reconvene at the call of the Chair.]

[Statements and other material submitted for the record follow:]

STATEMENT OF
LEE M. THOMAS
ASSISTANT ADMINISTRATOR FOR SOLID WASTE AND EMERGENCY RESPONSE
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
U.S. SENATE
APRIL 25, 1984

Good morning, Mr. Chairman and members of the Committee:

I am pleased to have the opportunity to appear today to discuss our implementation of the Superfund program and the implications and lessons it holds for reauthorization of the legislation. I appreciate your continuing interest in our efforts and look forward to working with you in pursuit of our shared goal of reauthorizing Superfund.

Successful implementation of the Superfund program is one of EPA's highest priorities. Indeed, stabilizing imminent threats at uncontrolled hazardous waste sites through Superfund removal actions and using Superfund remedial authorities to effect longer term site clean-ups are the Agency's top priorities for Fiscal Year 1985.

Progress of the Superfund Program

In the ten months since my swearing in as Assistant Administrator, the program has been growing with increasing speed, and we are putting money and resources into it as fast as they can be absorbed. We have already initiated the process which will lead to ultimate clean-up at more than 434 of the current National Priority List (NPL) sites.

As a result of many years of societal inattention, remedying hazardous substance contamination is an extremely complex and time-consuming process, which may require up to thirty years to complete at a given site. I should mention also that the process is not the exclusive province of EPA, and coordination of the efforts of other agencies and groups adds to the complexity of and is essential to successful response activity.

The U.S. Army Corps of Engineers is involved through managing remedial site design and construction, the U.S. Geological Survey through providing technical expertise on groundwater protection, and the Federal Emergency Management Administration through its relocation activities. The Agency for Toxic Substances and Disease Registry (ATSDR) monitors the health impacts on surrounding populations at many sites. Because critical public health considerations are, I know, of great interest to the Committee, let me digress a moment to elaborate on our overall relationship with the Department of Health and Human Services, particularly the Centers for Disease Control(CDC).

Over two years ago, we agreed with CDC to have a CDC public health advisor assigned to each of our regional offices to provide on the spot consultation and support. For example, when we are conducting removal actions, the CDC regional staffer may be called in by the on-scene coordinator to assess the public health threat, either informally or more formally through a memorandum between staff.

This has worked well, and provides a basis for further cooperative action. We are currently negotiating a memorandum of understanding with ATSDR, which has taken over the functions initially performed by CDC, to further delineate our respective roles and responsibilities and to expand our cooperation to remedial actions, specifically through insuring any necessary public health input in the Remedial Investigation/Feasibility Study process. We feel our increasing coordination with ATSDR greatly enhances our capability to respond in a manner which protects the public.

In addition to other Federal agencies, we must coordinate with State hazardous waste management programs, State Superfund programs, private contractors who actually perform site remedial work, the public, and the media. All these groups play a critical role in successful implementation of the program.

The charts attached to my testimony depict the upturn in the rate of program activity in detail, and I will be happy to explain them more fully at the conclusion of my statement. For now, I will just emphasize some of the major points.

The EPA inventory (ERRIS) has approximately 17,000 potentially hazardous waste sites listed on it, and we anticipate that the list could grow to over 22,000. By the end of Fiscal Year 1983, the Agency had completed a Preliminary Assessment (PA) for over 7,100 ERRIS sites, and we expect to complete all ERRIS site PA's by the end of Fiscal Year 1986. This step is crucial to a fuller understanding of the extent of the problem to be remedied. As a result of the assessments conducted to date, we have found that more than 2,200 sites have problems serious enough

to warrant moving them to the next stage in the remedial process, an in-depth site investigation (SI).

During the SI, investigators collect site-specific data through sampling, surveying, and monitoring in order to measure the extent of the problem. If the results of the SI indicate a serious problem, the site is scored under the Hazard Ranking System to determine if it should be listed on the National Priority List. The criteria for making that decision include the possible risk to the population, the hazard potential of substances found at the site, potential or actual contamination of air, groundwater supplies, and other pathways that affect human health, and the potential for destruction of sensitive ecosystems. Once on the NPL, a site becomes eligible for Fund-financed remedial action.

If we target a site for remedial action, a detailed Remedial Investigation/Feasibility Study (RI/FS) is conducted to assess the actual extent of contamination and propose appropriate remedies. This phase has either been completed or is under way at 210 NPL sites, including those where response action is being undertaken by responsible parties. Of these 210 sites, fifty-six have now moved into the Remedial Design phase, which immediately precedes initiation of the actual remedy. In short, we have developed real momentum in the program, and we are addressing the critical problems at an ever-increasing number of sites.

As part of the NPL scoring process, the Agency evaluates the potential need for emergency removal action at sites posing immediate threats to health or the environment. We will complete removal actions to stabilize all the sites currently on the NPL by the end of Fiscal Year 1985, a critical step in mitigating the threats they may present.

In addition, we have an active emergency response program designed to cope with other immediate threats to the public and the environment. Between December, 1980, and February, 1983, EPA conducted 114 removal actions at a cost of $25.5 million. From March, 1983, through the end of Fiscal Year 1983, we spent $22.6 million for 93 more removal actions. During Fiscal 1984, we anticipate conducting as many as 170 removals costing as much as $56 million. Further, in addition to the removal actions we complete ourselves, we monitor even more privately financed removals.

We are proud of the strides we have made recently in increasing the pace of Superfund response activities, and we are determined to keep moving as rapidly as possible. We are also well aware of the basic question, how fast can you speed up such a program without building in the potential for waste? Several constraints inherent in the remedial action process, both private party and Fund-financed, raise the possibility that we may be expanding our response activities to the limit of our capability to manage the program.

For example, completion of the RI/FS is the sine qua non for successful remedial action, but the process is subject to a number of physical and administrative limitations within the Federal Government, the States, and private industry.

Completion of necessary field work is often severely hampered by winter weather conditions, or is impossible without preliminary remedial action, such as drum staging, that can drag on for months. Complete analysis of some groundwater contamination problems requires sampling throughout a full year in order to assess conditions at both high and low water levels.

The inability of the analytical laboratory industry to further increase its capacity for organic sample analysis and high hazard sample analysis constitutes another major limitation on more rapid expansion of our RI/FS program. The industry is currently operating near capacity, having expanded slowly to meet the demands of the existing Superfund program. Any additional expansion of its capacity would require the hiring of qualified personnel and the acquisition of very highly specialized equipment. The lead time for procuring the equipment could extend to six months; for finding or training the competent personnel, it could be measured in years.

Accelerating the program pace more than we are already doing could also reduce drastically the level of State participation in the Superfund program. The legally prescribed competitive procurement procedures States must employ consume at least three months in the selection and preparation process before a contractor

may begin work. Because EPA has contracts already in place, most RI/FS's would have to be Federal lead projects, a result which runs counter to our goal of increasing State involvement in the response program.

Finally, one of our highest goals at EPA is opening up the Agency to public scrutiny, and citizen participation in the development of RI/FS's is beneficial to us. We must take care that our attempts to accelerate the program do not deny us the time needed to give serious consideration to the issues raised by citizens.

Thus, now that we are moving the Superfund program forcefully to meet the threats posed by abandoned hazardous waste sites, we face the challenges of maintaining a steady momentum and drawing upon the experience we are gaining to prepare the best possible proposal for reauthorization.

Reauthorization Considerations

The President has asked the Administrator to develop a proposal for extending the critical Superfund authorities which will expire at the end of September, 1985, so that there will be no loss of our hard-earned momentum in the program. The Congress itself, anticipating the need to reauthorize the program, directed EPA to study the extent of the threat still posed by abandoned hazardous waste sites upon expiration of the existing Superfund, what additional monies will be needed to respond to that threat, and what tax or mixture of taxes

will be the most effective and equitable way of raising the needed funds. The results of these studies, required by Section 301(a) of the Act, are to be submitted to the Congress by December 11, 1984.

We are currently deeply involved in fulfilling the statutory mandate and have designed many of the necessary methodologies, analytical frameworks, and data bases. We are confident we will meet the December deadline, and at that time, based on the results of the studies and additional experience with the program at its current high level, we will be in a position to draft the proposals the President seeks from us.

Among the more noteworthy of the Section 301(a) studies we will have completed by December is a sensitive analysis of the feasibility and desirability of different possible tax systems for financing response activities. It will include assessments of the effects of the exemption of copper, lead, zinc oxide, and fertilizer feedstocks from the feedstock tax and of the economic impact of taxing coal-derived substances and recycled metals. It will also include the results of our analysis of the pros and cons of replacing or supplementing the feedstock tax with a waste-end tax.

I also understand that the General Accounting Office is preparing studies relating to State experience with waste-end taxes, cost-estimates for cleaning-up NPL sites, the success of our Superfund removal program, and the difficulties encountered at several specific sites during clean-up. Reports

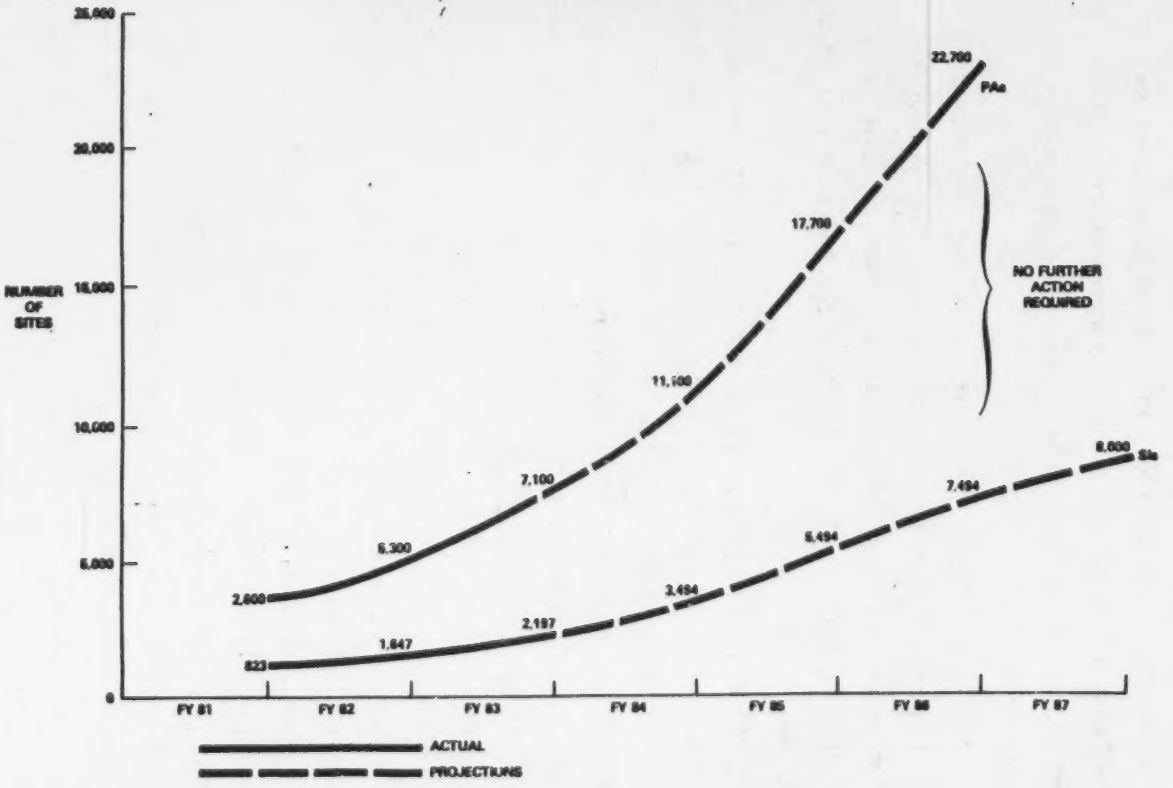
on these studies will be available at various times during 1984, with a comprehensive report concerning other questions that may arise during reauthorization of Superfund due in March, 1985.

Finally, we have established an Agency-wide Superfund Reauthorization Task Force, which is analyzing the entire spectrum of Superfund-related issues. When the Task Force has completed its study, I will be happy to share the results with you.

All of these studies--those prepared in satisfaction of the Section 301(a) mandate, the GAO studies, and the Task Force analyses--together with the invaluable lessons we are learning from our experience with the Superfund program itself will provide us a firm base to build upon in reauthorizing Superfund. No more important piece of environmental legislation will face the Congress in the next decade, and I look forward to our working together to develop the best law possible to counter the menace posed by years of inadequate waste disposal practices.

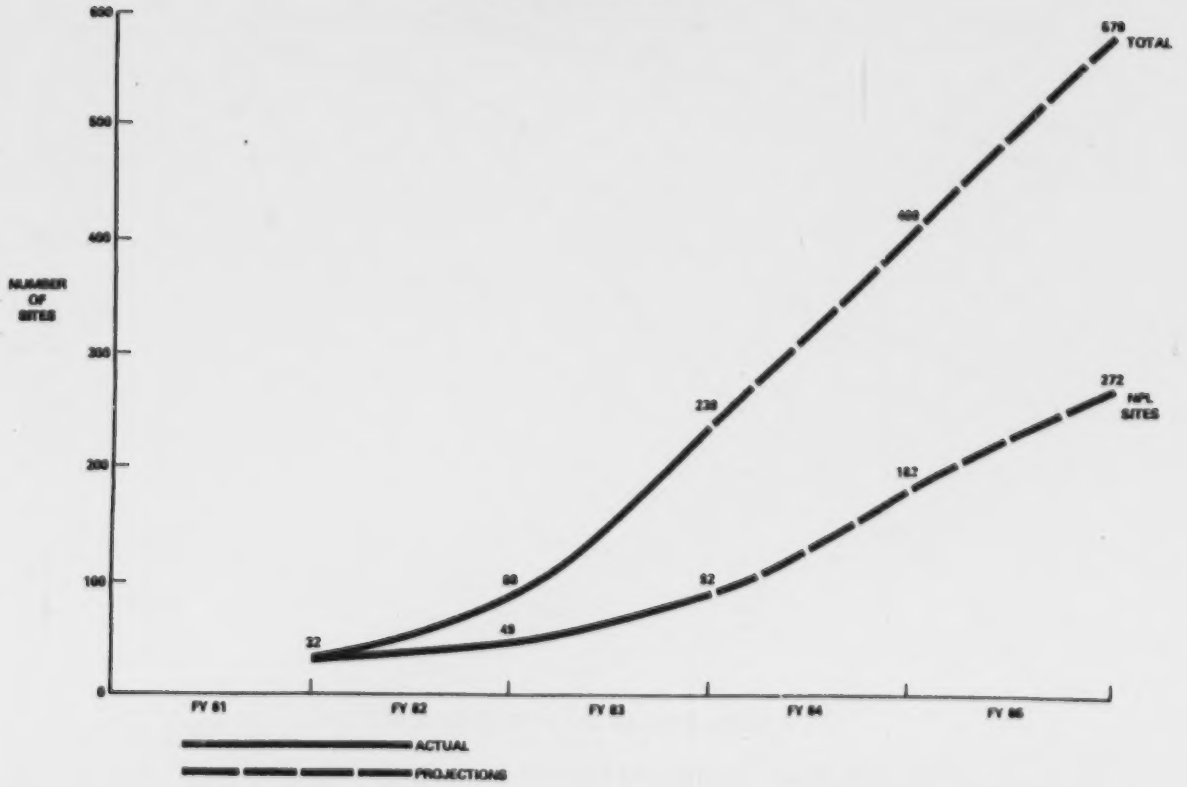
This concludes my prepared statement, Mr. Chairman. I would now like to explain and discuss the charts I brought, and then I will be happy to answer any questions you or members of the Committee may have. Thank you again for the opportunity to appear before you today.

SUPERFUND PROGRAM: PRELIMINARY ASSESSMENTS (PAs) AND SITE INSPECTIONS (SIs) COMPLETIONS

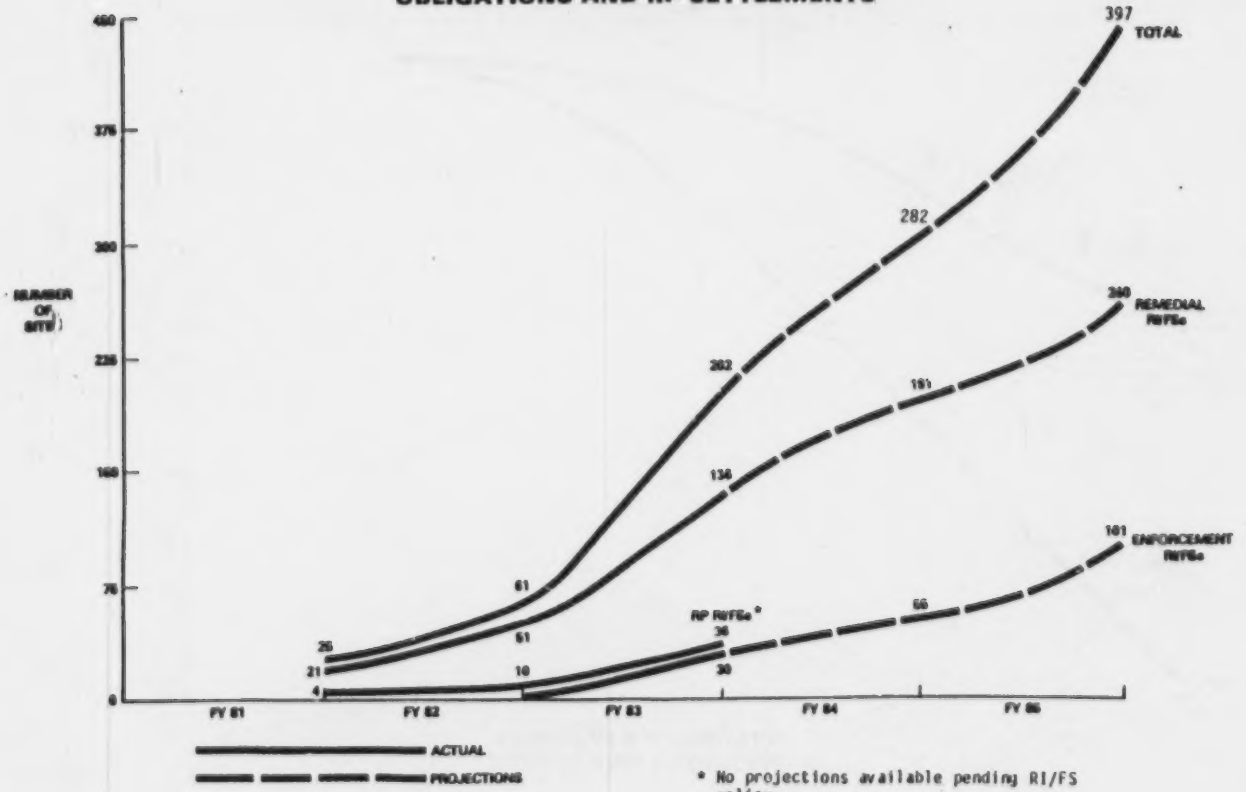


SORUCE: ERNS SYSTEM

SUPERFUND PROGRAM: REMOVALS APPROVED

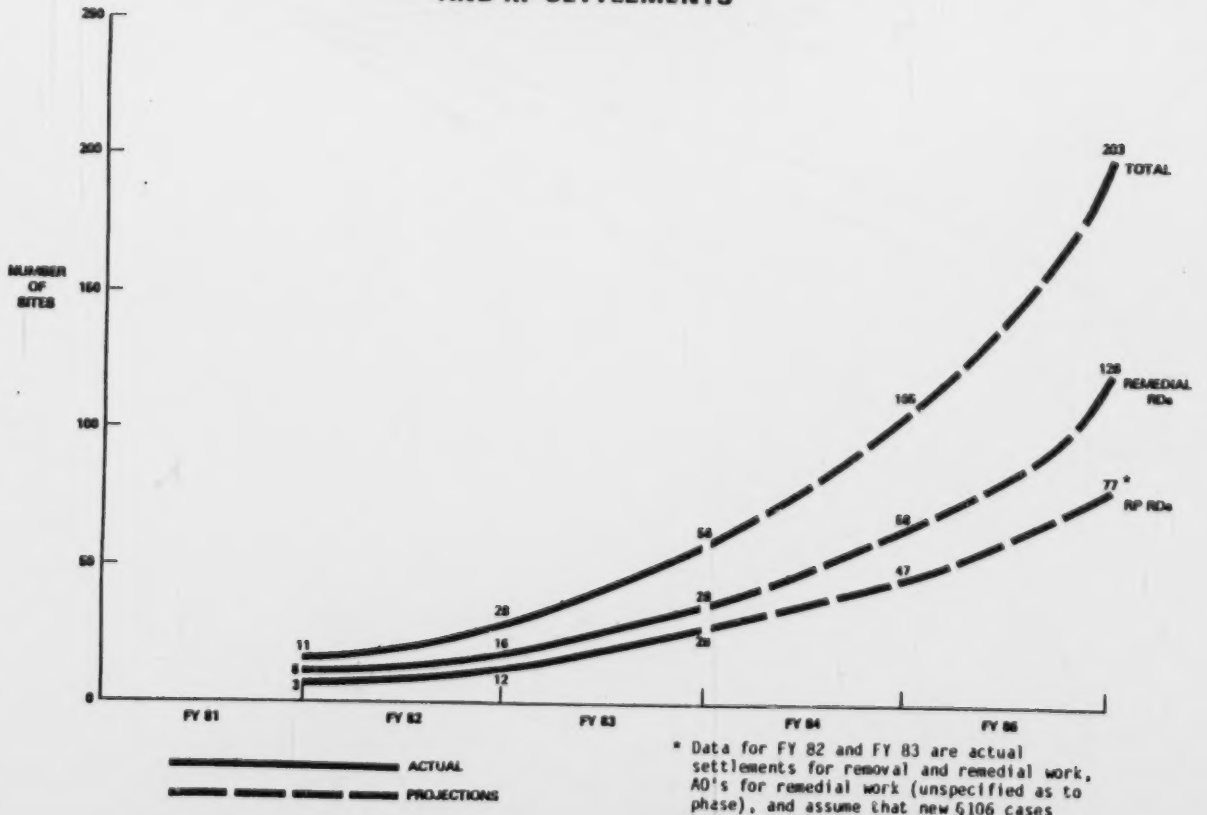


SUPERFUND PROGRAM:
REMEDIAL INVESTIGATIONS/FEASIBILITY STUDIES
(RI/FSs)
OBLIGATIONS AND RP SETTLEMENTS



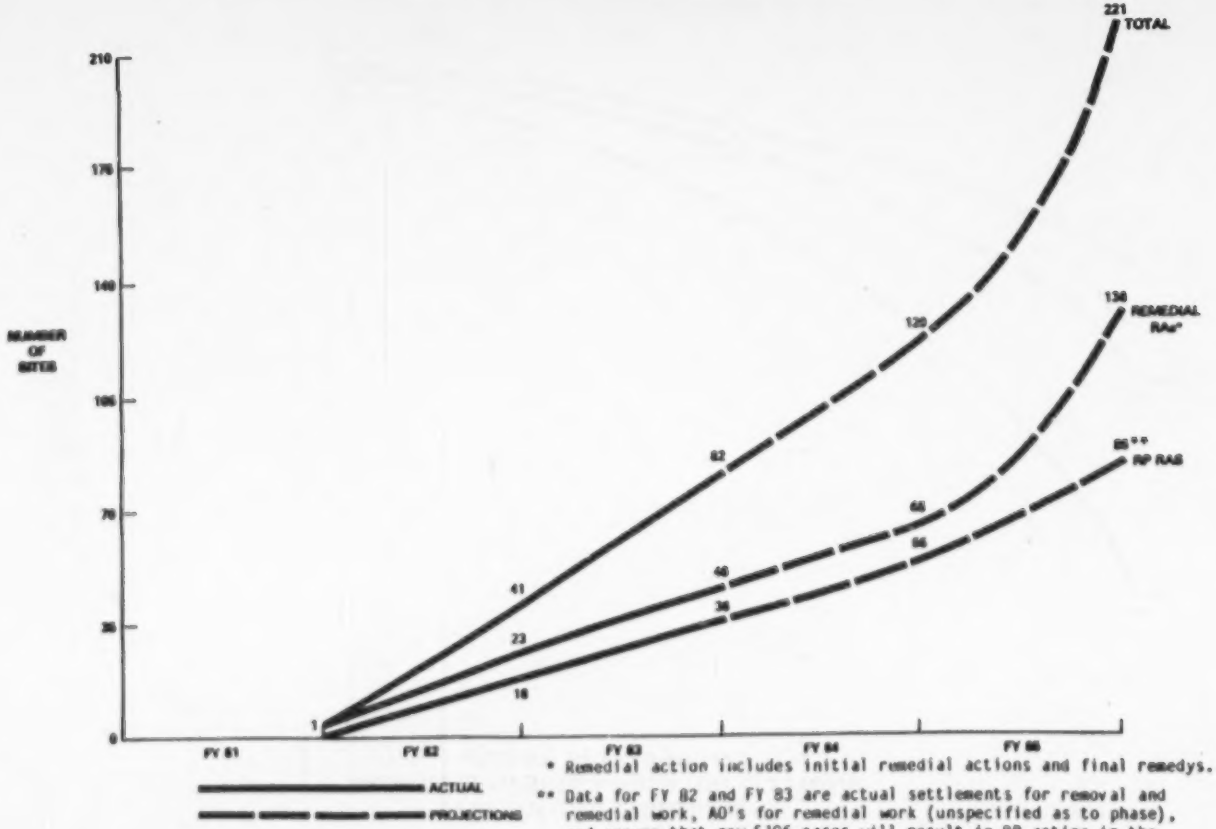
* No projections available pending RI/FS policy.

SUPERFUND PROGRAM:
REMEDIAL DESIGNS (RDs) OBLIGATIONS
AND RP SETTLEMENTS



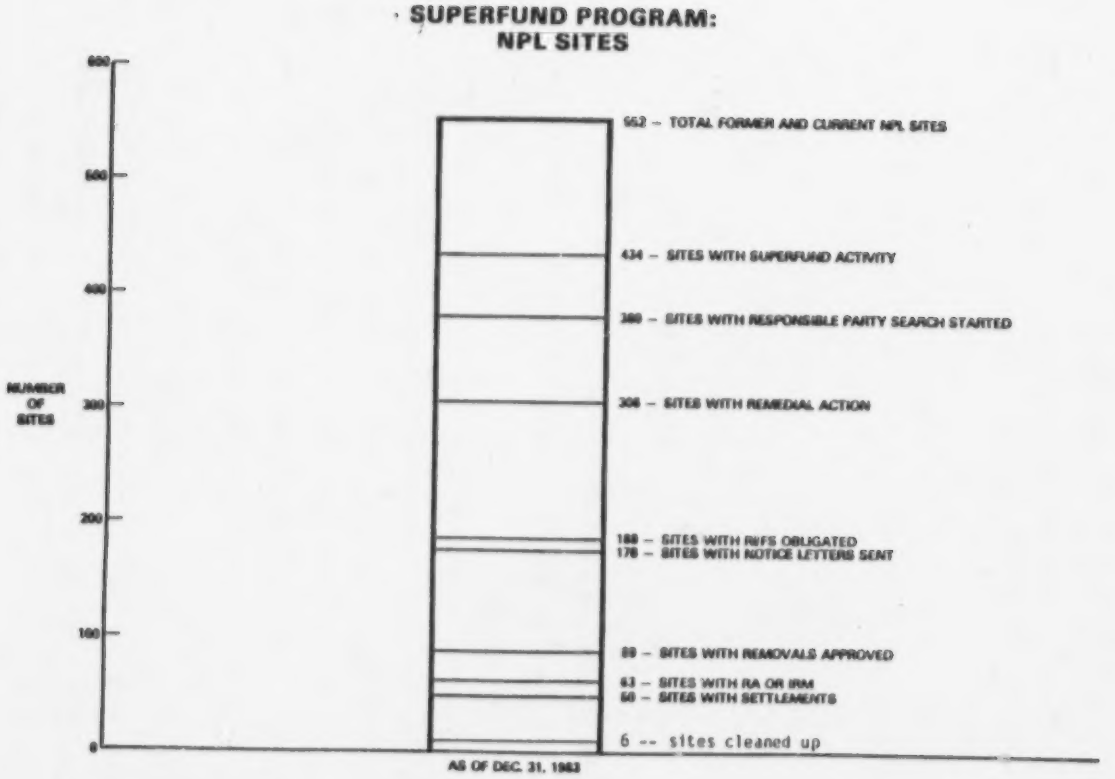
* Data for FY 82 and FY 83 are actual settlements for removal and remedial work, AO's for remedial work (unspecified as to phase), and assume that new §106 cases will result in RP action in the next year.

SUPERFUND PROGRAM:
REMEDIAL ACTIONS (RAs) OBLIGATIONS



* Remedial action includes initial remedial actions and final remedys.

** Data for FY 82 and FY 83 are actual settlements for removal and remedial work, AO's for remedial work (unspecified as to phase), and assume that new §106 cases will result in RP action in the


SUPERFUND PROGRAM:
NPL SITES
NUMBER OF SITES
600
500
400
300
200
100
0
552 – TOTAL FORMER AND CURRENT NPL SITES
434 – SITES WITH SUPERFUND ACTIVITY
380 – SITES WITH RESPONSIBLE PARTY SEARCH STARTED
306 – SITES WITH REMEDIAL ACTION
188 – SITES WITH RI/FS OBLIGATED
178 – SITES WITH NOTICE LETTERS SENT
89 – SITES WITH REMOVALS APPROVED
63 – SITES WITH RA OR IRM
60 – SITES WITH SETTLEMENTS
6 -- sites cleaned up
AS OF DEC. 31, 1983

TESTIMONY OF

NORMAN H. NOSENCHUCK, P.E.
DIRECTOR, DIVISION OF SOLID AND HAZARDOUS WASTE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AND

CHAIRMAN, SUPERFUND COMMITTEE
ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

WASHINGTON, D.C.

APRIL 25, 1984

Mr. Chairman and committee members, I value the opportunity to be here today to discuss why the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also known as the Federal Superfund, PL 96-510) must be expanded and extended. As Director, Division of Solid and Hazardous Waste, New York State Department of Environmental Conservation (NYSDEC), I am responsible for the hazardous and non-hazardous solid waste regulatory program in New York State, including CERCLA-related remedial activities for inactive hazardous waste sites. I am also the Chairman, Superfund Committee, Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

ATSTSWMO recently prepared a report for the United States Environmental Protection Agency (USEPA) and the ASTSWMO membership entitled State Cleanup Programs for Hazardous Substance Sites and Spills. With your permission, Mr. Chairman, I will submit the Key Findings of this report as part of my testimony. In the judgement of ASTSWMO, there are significantly more hazardous waste sites in need of response then prior estimates have indicated.

- At least 7,000 sites nationwide require some form of remediation.
- There are at least an additional 10,500 hazardous waste disposal sites, any of which has the potential to threaten public health and the environment.
- Some states have an especially large number of sites needing response, in particular, California, Michigan, New Jersey, New York and Pennsylvania.

In early January 1984, the draft New York State Inactive Hazardous Waste Remedial Plan was released. This draft report outlines New York State's plan to deal with the state's 895 known or suspected hazardous waste sites. The plan, prepared for approval by the New York State Superfund Management Board, provides an overview of the problem and discusses the needs, costs and priorities for remedial action.

With your permission Mr. Chairman, I will submit for the record the draft New York State Inactive Hazardous Waste Remedial Plan, along with Appendix A which addresses New York State's inactive hazardous waste sites program, Appendix B which is the inactive hazardous waste disposal sites annual report and Appendix C which are the fiscal aspects of the State Superfund Program.

This draft report lays out an estimate of New York State's hazardous waste sites cleanup needs, and serves as the starting point for discussion of the best way to obtain funding for this enormous task. The report discusses the 895 known or suspected hazardous waste sites in New York State and makes the estimate that nearly 300 of them will require substantial remedial measures to contain or eliminate chemicals that threaten public health or the environment.

Using numerous assumptions, the plan estimates the total cost for this remedial work at about $1.88 billion in 1983 dollars. The bulk of this construction cost is expected to be paid by responsible parties (approximately $1.17 billion) and another portion by the federal superfund (approximately $284 million based on the current federal superfund program). However, New York State's total cost to carry out the State portion of construction plus other program obligations still approaches $500 million.

The magnitude of the program to cleanup abandoned hazardous waste sites across New York State is far greater than originally estimated. The New York State Superfund program is funded from a waste-end tax: assessments on hazardous wastes generated or disposed of in the state; however, the funding structure has not produced expected revenues. The State Superfund Law provides for the collection of $10 million annually. We only collected about $3.12 million for the first four quarters. We are currently investigating and developing financial alternatives to increase the revenue generation potential.

Under our current waste-end tax in New York State we expect that future revenues are likely to decline as the tax base shrinks due to the state and federal regulatory programs and due in part to the New York State waste-end tax itself, since the tax is designed to change management practices.

Future State waste-end tax revenues could be significantly affected by federal decisions in connection with the proposed Federal Resource Conservation Recovery Act (RCRA) amendments which may reduce the amount of taxable wastes and possibly if the federal government would install a federal waste-end tax that would pre-empt state waste-end taxes.

Clearly one of our options would be to amend and improve the New York State Superfund waste-end tax, perhaps by substantially increasing the fee schedule. Another option would be to discard the waste-end tax and consider front-end taxes, such as: a State excise tax on the sale or use of petrochemicals, inorganic raw materials, and petroleum that might be similar to but independent of the Federal Superfund excise tax. Another option could be a state tax on the transfer of designated hazardous substances of petroleum to or from chemical plants, refineries and distribution terminals that might be similar to the transfer taxes in the states of New Jersey and Florida.

Another option could be a tax system combining state waste-end taxes and state front-end taxes.

In New York State, we have adopted a two-phase site investigation approach in getting our inactive hazardous waste site remedial program underway.

Phase I site investigations provide preliminary characterizations of hazardous substances present at each site; estimate pathways by which pollutants might be migrating away from the original site of disposal; identify population or resources which might be affected by pollutants from the site; observe how the disposal area was used or operated; and gather information regarding who might be responsible for wastes at the site.

After a Phase I investigation, we may choose to initiate an emergency response; to execute an order mandating responsible party cleanup; to nominate the site for the National Priorities List; or, where additional information is needed to determine site significance, to conduct further (Phase II) on-site investigation.

Phase II site investigations are ordered by the NYSDEC when Phase I results suggest that a significant threat to the environment may exist. Phase II investigations are intended to confirm or disprove the existence of a significant environmental threat. However, they are not sufficiently detailed to determine the full extent of contamination, to evaluate remedial alternatives, or to prepare a conceptual design for construction. After Phase II investigation, a final Hazard Ranking System (HRS) score can be assigned to the site and a priority for action selected.

After investigation to determine the significance of a site, the contamination is defined through detailed site investigation, and a feasibility study is conducted to determine a cost-effective remedy. The most viable alternative is then selected, construction documents are then prepared, the remedial work is then undertaken and, after completion, the long-term monitoring and maintenance program begins.

The current status of the New York State Superfund program is as follows:

- 29 sites are on the USEPA National Priorities List (NPL).
- we have executed 10 signed cooperative agreements with the USEPA.
- we have completed 200 Phase I studies using state funds in 1983.
- the USEPA has completed approximately 125 Phase I studies for the NYSDEC to date.
- we expect to complete 100 additional Phase II studies using New York State funds in 1984. The cost of these studies vary from approximately $25,000 to over $70,000; we figure an average cost of about $35,000 for each Phase II study.
- earlier this month we sent an additional 55 candidate sites to the USEPA for inclusion on the NPL.

There is a critical need to support the efforts of the states in connection with the Federal Superfund program. The work on the part of the states in order to obtain the information for the CERCLA Hazard Ranking System is considerable. At the present time the states do most of this work with state funds. Additionally, state funds pay for all the work in connection with the development of Cooperative Agreements (where the state takes the lead) for the needed remedial activities, or for the development of State Superfund Contracts (where the Federal Government takes the lead) for the needed remedial work. The Federal Superfund program does not support this work. This is not right. We are currently working with the USEPA to develop appropriate agreements to provide some up-front funds to the States. However, this is not enough. In my opinion, CERCLA should be amended not only to include the costs by the states to place sites on the Federal National Priorities List as eligible project costs, but also to include the state costs in connection with the development of Cooperative Agreements or State Superfund Contracts. These state costs should be authorized expenditures and funded at the same ratio that the remedial action is funded.

The USEPA, at the present time, also expects the states to pick up whatever additional expenses are necessary to implement CERCLA Consent Orders/Settlement Agreements from their own state resources. It is my opinion that the USEPA should make CERCLA money available to the states by changing their existing policy and provide money directly to the states for this purpose. I also recommend that the Congress, by statute, authorize the states to receive CERCLA funds in order to carry out their responsibilities under Consent Orders/Settlement Agreements resulting from enforcement actions in connection with the remediation of inactive hazardous waste sites.

We've been discussing providing adequate funds to clean up the problems of the past--inactive hazardous waste sites. This is what CERCLA addresses. What about preventing these problems in the future? There is a need to create economic incentives for generators and/or disposers to shift to waste reduction and waste management practices that are more desirable than land disposal practices. This could be accomplished by an appropriate waste-end tax system in addition to the current tax on hazardous waste which supports the CERCLA Post-closure Liability Trust Fund.

In this connection, I recommend the addition of an appropriate waste-end tax system under CERCLA to provide at least $400 million to the states for the administration of their RCRA hazardous waste management programs during the same five-year period of time that I recommend the extension of CERCLA.

I also recommend that no pre-emption clauses be included in CERCLA which will prevent the states from collecting their own front-end and waste-end taxes for state purposes.

The at least 50% state-match requirement for removal and remedial actions at sites owned and/or operated by the state or political subdivisions thereof should be changed to a 10% state-match, with 90% CERCLA funding.

The cost of operation and maintenance for all the remedial activities that will be undertaken in the years ahead will be enormous. CERCLA must be used to support these long-term operation and maintenance costs at the same 90% federal-10% statis ratio that funded the remedial action. Operation and maintenance activities should be evaluated on a regular basis to determine when these activities may safely be discontinued.

If we as a nation are sincere about cleaning up the problems of the past--the remediation of inactive hazardous waste sites--we must recognize that it will take time, it will take money, and it will take resources. The problem is enormous. We all know that. The states need fiscal help from CERCLA to assist them in remediating the inactive hazardous waste sites within their borders. We look to the Congress for assistance. Help us by extending and expanding CERCLA so that the Superfund program will truly meet the expectations and needs of the American people.

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STATE CLEANUP PROGRAMS FOR HAZARDOUS SUBSTANCE SITES AND SPILLS

A Report to the
ASTSWMO Membership

Prepared by
The Association of State and Territorial
Solid Waste Management Officials
Under U.S. EPA Special Agreement X-901453

December 21, 1983

KEY FINDINGS

We think there are significant national implications to the data in the report. In this executive summary, we highlight these implications. Most undoubtedly match conclusions draws by ASTSWMO members from years of experience with program implementation, but until this time, there have not been solid national data to substantiate these conclusions, nor could ASTSWMO members easily judge the extent to which their experience corresponds to that of ASTSWMO members in other states and territories. The main implications of the data we have collected are as follows.

(1) In the judgment of ASTSWMO members, there are significantly more hazardous waste sites in need of response than prior estimates have indicated.

- o At least 7,113 sites nationwide require some form of remediation.
- o There are at least an additional 10,508 hazardous waste disposal sites, any of which has the potential to threaten public health and the environment.
- o Some states have an especially large number of sites needing response, in particular, California, Michigan, New Jersey, New York and Pennsylvania.

These figures understate the extent of the nation's uncontrolled hazardous waste site problem because they do not take into account the states not responding to our questionnaire. Some of these states probably have many sites needing remediation.

(2) Most of the hazardous waste sites needing response are at present ineligible for federal funding because they are not on EPA's National Priorities List (NPL). Under current assumptions, most may never be eligible for federal funding.

- o Superfund remedial actions can be taken only at sites on the NPL. The NPL, however, currently includes only 546 sites.[1] This figure represents eight percent of the 7,113 sites state officials judge in need of response.
- o Although sites will be added to the NPL in the future, it is relatively certain that the list will never grow large enough to include 7,113 sites.

(3) With present funding levels, a full cleanup of all the sites needing response cannot be completed before the middle of the twenty-first century.

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[1] 48 FR 40658 et seq. (September 8, 1983). Seven of these sites are listed as pending; 133 are proposed but not yet final.

- o ASTSWMO estimates that it will take 90 years -- that is, until 2073 -- to clean up the 7,113 sites needing response if annual state and federal funding can be maintained over this period at FY 1984 levels. This estimate assumes the average remedial action will cost $6 million.

- o If the average cost of a remedial action is only $1 million after the most serious 1,500 site are cleaned up, it will take 28 years to clean up the 7,113 sites -- that is, until the year 2011. This lower estimate also assumes that private parties will finance remedial actions at 10 percent of the sites needing response.

These estimates, large though they may be, probably understate the amount of time required to address the nation's hazardous waste problems because they rest on debatable assumptions. Both estimates assume federal funding will continue to be available as long as needed, despite the present scheduled expiration in 1985 of the tax that finances the Superfund program. Both estimates neglect the likely increase in the average cost of a remedial action caused over time by price inflation and the increased dispersion of hazardous substances into the environment, which makes cleanup more difficult and consequently more expensive to accomplish. In addition, these estimates are based on the sum of all state funds and do not reflect the fact that state funds cannot be transferred across state boundaries. Thus, the total state funds available might not be distributed properly to meet the varying needs of different states.

(4) To the extent that resources are available, the states and territories are taking concerted action to clean up hazardous waste sites and spills.

- o The states expect to spend at least $301 million on hazardous substance cleanup activities in FY 1984 (although 76 percent of these funds are from the federal government).

- o The states have conducted at least 157 short-term site cleanups in FY 1983 (these are cleanup actions costing less than $1 million or lasting less than six months). Since FY 1981, the states have also initiated at least 133 long-term cleanups at sites not on the NPL and completed 33.

- o States have been especially active in responding to spills of hazardous substances, conducting or overseeing over 8,000 spill responses annually in FY 1981 and FY 1982. Almost all of these spill responses were paid for by private parties.

- o Enforcement has been a high priority among the states. Our respondents took enforcement actions at over 2,000 hazardous waste sites since January 1981, with considerable success: about 40 percent of the 1,537 state administrative actions have led to cleanups conducted by private parties; about 24 percent of the 356 judicial actions have led to private party cleanups. The precise success rate of judicial action is uncertain because many cases may be pending in the lengthy litigation process.

- With current staff resources for overseeing cleanup actions (as distinct from financial resources needed to fund actual cleanup), states are capable of cleaning up the bulk of the sites needing response in approximately 23 years. If states' optimal staff levels were reached, the length of time would be reduced to 16 years.

It is important to note that these site and spill cleanups have all been accomplished without direct federal financial support and do not include the work of the states with the federal government on Superfund remedial actions.

These data also indicate that private parties have been financing a strikingly large portion of the hazardous substance cleanups conducted in the U.S. -- a much larger portion than apparent from their contribution to Superfund response actions.

(5) State are operating under severe resource constraints. Both funding and staffing levels are inadequate to address fully the environmental problems facing the states.

- Our respondents indicated they would need to increase their number of technical staff -- engineers and scientific specialist -- by 84 percent to achieve optimal staffing levels.

- The average state funding available in FY 1984 per site needing response is $66,836, a low figure.

- Some states now have not funds whatsoever for hazardous substance cleanup programs.

- Although the states have made considerable progress with available resources, they will need to rely even more on federal dollars for support in the future. About 67 percent of respondent states' budgets for hazardous substance cleanup programs is currently obtained from the federal government; to maintain state programs, this figure will need to grow to 76 percent in FY 1984.

- Funds directed toward enforcement actions have had a high success rate in securing cleanup by the responsible party. Private parties, however, cannot handle all of the sites needing response; increased government funding for cleanup actions will also be needed.

Some states are relatively well-positioned financially. These states, however, also usually have the most sites needing response and do not expect to have sufficient funds to carry out all necessary activities.

CONCLUSION

In summary, our members know they are facing an environmental problem of great dimensions. There is some urgency to the situation, because the longer action is postponed, the greater the cost of action, given not only inflation but also the deterioration over time of a site and the resultant exacerbation of the environmental problem. With the level of funding presently available, however, it will take an unacceptably long time to address all the sites in need of response.

The burden of the nation's hazardous waste problems will fall primarily on the states, even if the federal Superfund program is extended. The record of states' accomplishment shown by our data indicates that if given the resources they need, our members are capable of implementing programs that can respond effectively to these problems.

DRAFT

NEW YORK STATE

INACTIVE HAZARDOUS WASTE REMEDIAL PLAN

This report outlines New York State's plan to deal with the state's 895 known or suspected hazardous waste sites. The plan, prepared in accordance with Chapter 857 of the Laws of 1982 for approval by the State Superfund Management Board, provides an overview of the problem and discusses the needs, costs and priorities for remedial action. Detailed information about inactive hazardous waste sites and the state's superfund is included in an appendix to the plan.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Note: The following has been excerpted from the above named report. The complete report together with appendices have been retained in committee files.

EXECUTIVE SUMMARY

This report outlines New York State's plan for cleanup and other remedial actions at the 895 sites in the state now known or suspected to contain hazardous wastes.

Nearly 300 of these sites are expected to need some form of remedial construction. Using numerous assumptions, the plan estimates the total cost for this remedial work at about $1.88 billion in 1983 dollars. The bulk of this construction cost is expected to be paid by responsible parties, and another portion by federal superfund. However, New York's total cost to carry out the state portion of construction plus other program obligations still approaches $500 million. The first year's revenue from fees charged to industrial generators of the hazardous wastes, intended to finance the state's share of the cost, amounted to only $3.1 million.

Under the plan, the balance of the $1.88 billion needed for statewide cleanup would come from two sources: the federal "superfund" program could be expected to pay about $284 million if the Comprehensive Environmental Response, Compensation and Liability Act is extended; and identified disposal site owners and former waste generators known to have used the sites would contribute an estimated $1.17 billion.

This plan has been prepared by the Department of Environmental Conservation for review by the State Superfund Management Board. The Board has the authority to develop strategy options for resolving the shortfall in state superfund. The Board is charged with making recommendations to the Governor and Legislature on future changes to the law governing inactive hazardous waste disposal sites, as well as on appropriate levels and sources of funding to carry out the state plan.

To show the implications of various possible strategies, the plan includes estimates of how much funding would be needed from state superfund each year if the total cleanup program were carried out over three possible timetables: 10 years, 15 years and 20 years.

Lengthening the term of the program, besides delaying cleanup, also multiplies the overall cost because of the effect of inflation. A long term program will probably prove necessary, however, because of the magnitude of the construction required.

The plan's five chapters discuss key aspects of the inactive hazardous waste sites cleanup program:

I. Introduction and Background describes briefly the events of the past ten years which led to the passage of two major state laws dealing with hazardous waste disposal. One law requires the state environmental and health agencies to inventory all known or suspected sites, and to attempt to obtain funds for remediation work from parties responsible for creating the sites. The other law establishes the state superfund fee as a source of revenue to pay part of the cleanup costs, and sets up the state remediation planning mechanism and the superfund Management Board. The chapter also sketches the structure and activities of the federal and state hazardous waste site programs.

II. Remedial Action Needs shows that the 895 hazardous waste sites in the state will require a great deal of remedial work. To date, environmental or public health significance has been determined for only 341 sites, with 554 yet to be evaluated. The 144 sites already found to be significant, as well as many others yet to be identified, are expected to need detailed investigation, remedial design and construction. Most sites where remedial construction is carried out will require long-term monitoring. State superfund must pay the cost of monitoring at sites remediated by federal superfund, as well as those cleaned up under state superfund. The total number of sites which state superfund must ultimately pay to monitor is expected to exceed 100.

III. Selection of Priorities for Remedial Action describes how DEC decides which sites have the most urgent need for remediation. The Department will assign each site to one of five classifications established in state law, on the basis of health impact evaluations and environmental hazard scores:

Classification 1 sites are defined as sites causing imminent danger to the environment or public health, and requiring immediate remedial action. New York has no site in this classification today, but if any site is found causing imminent hazard, it will automatically assume first priority for remedial action.

Classification 2 sites are those for which there is enough information to determine that they pose a significant threat to public health or the environment, and action is required. New York has 144 sites in this class, all designated on the basis of significant environmental threat. If any sites posing health threats are found, these will automatically assume the highest priority within this classification.

DEC has developed a temporary sub-classification 2a for sites for which information is inadequate. A total of 554 sites is in this classification, and obtaining enough data to classify these sites is a high priority for the inactive hazardous waste sites program. DEC estimates that roughly one-fourth (139) of these sites will need remedial construction.

Classification 3 sites are those for which action may be deferred because they have been determined not to pose significant threats to public health or the environment. New York has 89 sites in this class. Investigations will be conducted at classification 3 sites, to verify the decision that remedial action may be deferred.

Classification 4 sites, totalling 96, are those sites which have been properly closed, but which require continued monitoring and management. The plan contains provision for monitoring at these sites, after commencement of a construction program.

Classification 5 sites, a total of 12, are those which have been cleaned up and require no further monitoring.

IV. Total Remedial Action Costs describes the process by which DEC arrived at the overall estimate of $1.88 billion for remedial action at the state's most significant inactive hazardous waste sites, and gives details of

the many uncertainties and assumptions in the estimate. Not only are data lacking to reliably rank all sites by order of priority, but also experience in hazardous waste site remediation is too limited to allow reliable construction cost estimation.

For cost estimation purposes, the plan puts the average costs for remediating each site at $6.64 million, and estimates that cleanup will be necessary at 282 sites, for a total of $1.88 billion. Using still other assumptions, this total cost is apportioned among responsible parties, federal superfund and state superfund. State superfund must also bear the costs of site investigation, emergency cleanups, federal superfund match, monitoring after remediation, and program support, bringing the total required from state superfund to approximately $500 million.

V. Strategy for Remedial Action suggests that a state policy must be established to resolve the discrepancy between the immense need and the available revenues. An acceptable level of cleanup over an appropriate length of time must be agreed upon, to be financed by an acceptable level of assessment upon generating industries or other funding sources.

Recommending such a policy strategy is the task of the State Superfund Management Board.

In an appendix to the plan, all of the state's 695 hazardous waste disposal sites are listed, along with sites which have been investigated and removed from the list. This list shows, by county, the name, location, status and classification of each site.

B. Conclusions from Expenditure Summary

This plan does not recommend a strategy for remedial action, because the Superfund Management Board is charged with making recommendations regarding funding and legislative needs. However, certain conclusions do emerge from consideration of Tables 4, 5 and 6, and Figures 2, 3 and 4.

1. The longer the term of the plan, the greater are the total costs, both in 1983 dollars and when corrected for inflation. As shown in Table 7, the impact of inflation becomes substantially greater as the term grows longer.

TABLE 7

TOTAL REMEDIAL PLAN COSTS IN MILLIONS

Term	Total Costs in 1983 Dollars	Total Costs Collected for Inflation
10-year	498.4	791.9
15-year	505.5	953.
20-year	512.7	1151.

2. The current state superfund revenue rate of approximately $3.1 million per year is clearly inadequate to meet the total needs within any time frame shown.

3. The annual rate of state superfund expenditure for short-term plans is very high. For both the 10- and 15-year plans, several years' annual expenditures exceed $100 million.

Good Morning, my name is George J. Tyler, Assistant Commissioner for Environmental Management and Control of the New Jersey Department of Environmental Protection. I am representing New Jersey and the Association of State and Territorial Solid Waste Management Officials.

This is somewhat unusual for me since our Governor Thomas H. Kean expects to be before you at your next hearing on this same issue. Governor Kean, as you may know, has continuously advocated and supported New Jersey's cleanup program and the reauthorization of CERCLA.

I come before you today with a two-fold mission. First and foremost, CERCLA must be reauthorized and very quickly.

Reauthorization is such a compelling issue that there is a clear consensus among the states and within all levels of state government that CERCLA-Superfund must be reauthorized and a major increase be made in the funding levels provided in the law.

The national program will slow down dramatically in October of this year or even stop because of budget constraints unless CERCLA is reauthorized quickly. New Jersey will need 109 million federal dollars for FY '85. If funding is not provided, the more than fifty active projects now underway will come to a halt. New Jersey has continued to support Senator Lautenberg and Senator Bradley in their efforts to extend the superfund program for at least an additional 5-years.

Should CERCLA not be reauthorized immediately, then we strongly urge the passage of the RCRA amendments now being considered by Senators Lautenberg and Bradley, which would provide a mechanism to permit State programs to continue in the absence of available Federal dollars. Under these Lautenberg-Bradley amendents, states would be able to use their own monies and receive credit to be used for work at other hazardous sites whenever federal funding is again available. In fact, recognizing that CERCLA amendments will, at best, take sometime to enact, we support this proposal even as a parallel legislative effort.

I. Reauthorization

-CERCLA currently provides a $1.6 billion fund raised by a tax imposed on the petrochemical industry. This tax will end September 30, 1985, at the latest.

-The magnitude of the hazardous site cleanup problem was substantially underestimated when CERCLA was first enacted.

Current funding levels are inadequate to cleanup even a fraction of the sites. The Association of State and Territorial Solid Waste Management Officials and the National Governor's Association has recommended that the Hazardous Substance Response Trust Fund be increased to at least 9 billion for 5-years so that it will be adequate to address the current sites on the National Priorities List (NPL) and new sites yet to be proposed. The administrative costs to both EPA and the states must be considered with the addition of operation and maintenance costs.

-New Jersey alone could deplete the remaining funds, under current law.

-By the end of FY '84, New Jersey will have underway or completed

39 Feasibility Studies projects

16 Design projects

17 Construction/Initial removal projects

-New Jersey will need $109 million for FY '85 to stay on schedule with ou Management Cleanup Plan.

-In addition New Jersey will require at least $124 million for FY '86.

-New Jersey's cleanup program will be substantially delayed unless significant federal monies are available in October of this year. (The beginning of Federal Fiscal Year 1985.) For your information, we will provide you with New Jersey's program status report which was prepared for the recent State of New Jersey's Joint Appropriations Committee hearing and our Management Plan for Hazardous Waste Site Cleanups to augment these points.

-If CERCLA is not reauthorized, our 39 feasibility studies and 16 design projects will not proceed toward construction and cleanup. Most of these projects stand high on the NPL and have a direct impact on New Jersey's environment. This is typical of many on-going projects throughout the nation. Failure to contain spreading of contaminated groundwater, will have dire consequences for the environment and will undoubtedly increase ultimate response costs at any number of sites nationally and a significant number in New Jersey.

-In the absence of a reauthorization of CERCLA, including a major increase in the funding level provided for in the current law, it is absolutely essential that an alternative funding scheme be enacted to permit state cleanup programs to continue.

-Amendments to the RCRA legislation now before the Senate, are being considered by Senators Lautenberg & Bradley. They provide one such mechanism. We support this proposal which would also amend CERCLA in three important ways:

1. Most importantly, it would provide cost-credits for states which opt to continue cleanup programs even if CERCLA is not authorized.

2. It would eliminate any question of federal pre-emption.

3. It would clarify current law regarding the issue of the federal share of the costs for long-term operation and maintenance.

-In our opinion, it will be a national tragedy if this bill is not enacted or alternatively if CERCLA is not reauthorized.

-Senators Lautenberg and Bradley have sponsored these amendments; New Jersey has, of course, strongly supported them.

II. Long-Term Maintenance

-Current language in the Act has left financial responsibility for long-term maintenance, such as groundwater treatment, up in the air.

-EPA has required the states to bear 100% of all operation & maintenance costs after one year.

-New Jersey maintains that the 90/10 cost share is provided for by the current law. However, EPA has always elected to separate operation and maintenance from overall project costs. EPA interprets the present language of Section 104 to require state payment of 100% of the O & M costs.

-Maintenance costs in many cases will be the most costly phase of remedial action. (e.g. groundwater treatment will be required at two New Jersey Superfund sites for 10 to 15 years at a cost of approximately $1 million per year.)

-Should the state be responsible for 100% of these costs, New Jersey's funding sources would be quickly depleted.

-This would eliminate the state's ability to meet its cost share responsibilities at other sites and prevent implementation of needed cleanup activities.

-As ASTSWMO has recommended, the Response Trust Fund should be used to support operation and maintenance costs with the 10% state match requirement. The cost of remedial alternatives for projects should be based on the capital costs for construction, plus operation and maintenance.

III. State Cost Credits

-Before Superfund became operational, New Jersey committed substantial funds for the cleanup of a number of sites.

-New Jersey only needs a small portion of the credit due to complete cleanup at these individual sites. Indeed work at most of these sites is already finished. The rest of the credit due would be lost under the current law.

-Credit should be transferrable from one site to another within a state under Section 104(c). This would avoid penalizing states for their responsible early efforts to cleanup these hazards.

-If CERCLA is not reauthorized a simple amendment here would permit state cleanup programs to continue. It would allow the states to accrue credit for Superfund work it does with its own fiscal resources. All such credits could be developed under agreements with EPA, so that federal cost control and project selection control is not waived. We have worked with Senators Lautenberg and Bradley to develop such language.

IV. Cost Share on State Owned Sites

-Section 104(c) provides that the state will share at least 50% of the costs for actions at sites owned by the state or its political subdivision.

-EPA has not established criteria to determine the appropriate state share at such sites.

-We are in support of NGA Policy which says the state share for all sites, including those sites owned by the states or their political subdivision at the time of the hazardous discharge, be limited to the 10% share. This share should eliminate all liabilities under CERCLA for the state or political subdivision.

-The issue of cost share on state owned sites has caused delays on remedial activities, one such example is the GEMS landfill project. This site was owned but not operated by Gloucester Township; the cost share negotiations substantially delayed early cleanup efforts. Section 104(c), at the very least, should be amended to make 50% a maximum state share and end these delays.

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V. Federal Pre-emption

-Language in Section 114 questions a state's authority to tax facilities currently taxed under Superfund.

-This section has spawned at least five different lawsuits in New Jersey alone, clouding our ability to move on cleanup projects until the federal government determines whether or not the projects are eligible for CERCLA funding. The pre-emption language is totally inappropriate and should be eliminated.

VI. State Role in Superfund

-We concur with the National Governors Association's position that the current centralized decision making process in Washington has unnecessarily delayed the Superfund program. The program would operate much more efficiently if the Regions and states were provided more authority in remedial action planning and implementation decisions.

-The law should be amended to allow for the development of individual state response programs modeled after the New Jersey Management Plan for hazardous waste site cleanups (1983-1986).

-This plan was approved by EPA Region II and includes the scheduling of cleanup actions at both NPL and non-NPL sites. The plan provides the framework scheduling, enforcement actions, funding source identification and staffing needs.

-We agree with the NGA that CERCLA should be amended to provide for the development of such plans and require that EPA, Headquarters, or even better the EPA Regional office, be provided the authority to review and approve these plans within a limited time period.

-This would enable the states to assume full responsibility for cleanup actions at sites for which they have chosen to take the lead.

VII. Cleanup Standards

-Lack of definitive cleanup standards has already resulted in delays in the selection of publically funded remedial actions and difficulties in enforcement actions with responsible parties.

-We concur with ASTSWMO in their position that EPA be required to work expeditiously with the states in developing the appropriate risk assessment methodology to be used in developing standards.

-EPA should be required to develop these standards as soon as possible for inclusion in the National Contingency Plan as mandated by CERCLA.

VIII. Additional Funding

-We also strongly support the Association of State and Territorial Solid Waste Management Officials (ASTSWMO) position that funds from CERCLA must be made available to the states through either the 90%/10% grant process or some other funding mechanisms to:

1. support the effort of the state to identify and assess the hazards posed by new sites;

2. develop, implement, and maintain the stace's contingency plan;

3. to provide funding for additional staff for the administration of state programs, state lead projects to strongly support and finance state health studies conducted in conjunction with and at the request of the Department of Health and Human Services, and finally;

4. state enforcement activities at sites listed on the NPL list.

-These funds should be made available to the states and for the financing of the state programs and staff support up front and separate from site specific cooperative agreements.

Management Plan 1983-1986

For Hazardous Waste Site Cleanups in New Jersey

August 1983
N.J. Department of Environmental Protection

Note: The following has been excerpted from the above named plan. The complete document has been retained in committee files.

Division of Waste Management - Hazardous Site Mitigation Administration

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION

Management Plan 1983-1986 for Hazardous Waste Site Cleanups in New Jersey

Introduction

This Management Plan has been prepared by the Department of Environmental Protection (DEP), Division of Waste Management, for the period of 1983 - 1986. The purpose of the Plan is to develop a systematic approach to remedial action at hazardous waste* sites, to coordinate cleanup and enforcement actions and to identify future funding needs and sources.

There are a total of 106 hazardous waste sites in the Plan (Attachment A). These include: 65 sites on the National Priorities List (NPL) issued by the U.S. Environmental Protection Agency (EPA) on December 20, 1982 and eligible for Federal Superfund monies, and 41 sites which were not included on the NPL. Thirty-four drum dump sites listed in the draft Plan approved by EPA on April 11, 1983, were cleaned up in 1983. Those sites not on the NPL will be addressed through New Jersey's Spill Compensation Fund and Hazardous Discharge Fund, as were the recently cleaned up sites. While cleanup projects are expected to be initiated within the period of the Plan, completion of cleanups at all scheduled sites will be a seven to eight year effort, with some sites requiring maintenance for many years beyond that time.

As additional sites are approved for Superfund status, or as other sites requiring priority status are identified, the list will be changed accordingly. For example, in response to the discovery of chemical contamination with dioxin at some industrial sites, four such sites** have recently been added to the Plan. These discoveries were made as a result of systematic investigations conducted by a special Dioxin Task Force instituted by DEP and stringent precautions are being taken to limit human and environmental exposure to the chemical at these sites. To date, sampling and analyses have been conducted at 11 such priority sites and cleanup has ensued in several areas.

The plan also lists the 68 hazardous waste sites (Attachment B) with over 10,000 drums cleaned up by DEP since 1980 at a cost of approximately $3 million. Including the $26 million spent on cleanup of Chemical Control in Elizabeth and $6 million on Goose Farm in Plumsted Township, the State's cost for remedial work at these 70 hazardous waste sites is over $35 million to date.

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*"Hazardous Waste" is being used here as a generic term to include discharges of all hazardous materials which pose a threat to public health or the environment.

**Blue Spruce International, Inc., Chemical Insecticide Corporation, Diamond Alkali/Diamond Shamrock Corporation and Givaudan Corporation.

The Plan represents the culmination of a review process which started with an original list of sites ranked by DEP and EPA according to the Federal Hazard Ranking System (HRS). This system is based on potential danger to public health and the environment, and takes into account surface and ground water pollution as well as releases of hazardous chemicals into the atmosphere. Emerging from this list were 93 sites which, when further screened, were reduced to 72 for submission to EPA in Washington based on information available at the time. Of these, 17 sites received high priority approval in mid-1982. In December, 1982, EPA identified a total of 93 New Jersey sites which are eligible for Superfund monies. DEP will continue to evaluate sites which are not now eligible for Superfund assistance, and some of these sites have been included in the Plan. Currently, 21 sites are being evaluated by EPA for Superfund status (Attachment E).

The three major stages of a hazardous waste site cleanup procedure are: 1) a feasibility study to determine the extent of the problem and to recommend remedial alternatives; 2) an engineering design of the selected remedial action to mitigate the problem and 3) the remedial action, or actual physical cleanup process, including treatment and/or removal. The Federal Superfund program provides 100 percent of feasibility study and engineering design costs, and up to 90 percent of remedial costs for eligible hazardous waste sites, with the State providing the remainder of the monies from either the New Jersey Spill Compensation Fund or the $100 million Hazardous Discharge Fund approved by voters in November 1981. Because of this funding mechanism, New Jersey will need the full cooperation and assistance of the EPA, both in Region II in New York City, and from headquarters in Washington. In some cases DEP will have responsibility for cleanup programs while in others, EPA will take the lead.

To date, the State has entered into contracts/cooperative agreements with the EPA for remedial action at 13 sites. In addition, 11 starings for the initiation of feasibility studies are anticipated by the fall of 1983, and amendments to 6 of the 13 existing contracts/cooperative agreements for engineering design and remedial actions are expected in 1983.

The actions proposed in the Plan are currently estimated to cost approximately $232 million (Attachment F), although this amount could increase substantially depending upon further findings and conversely this. Estimated costs do not include long-term maintenance costs, such as ground water pumping and treatment, which may be required at some sites. In order to estimate project duration and cost, the sites included in the Plan were considered on the basis of the anticipated soil and ground water contamination. The most difficult, and thus most costly, sites are those exhibiting extensive soil and ground water contamination and requiring complex and lengthy procedures for cleanup completion.

Scheduling Methodology

DEP has developed a methodology for scheduling cleanup activities at both Superfund and non-Superfund sites. This system provides a means of tracking progress in cleanup operations.

Sites included on the proposed National Priorities List (NPL) (Superfund sites), were considered to represent the greatest potential hazard to public health and/or the environment. The sites included on the NPL where remedial action had previously been projected for initiation were scheduled first (e.g., Burnt Fly Bog, Bridgeport Rental and Oil Services, etc.) (See Attachment C). All other NPL sites were scheduled in order of the Hazard Ranking System (HRS) score at a rate of approximately one per month. Sites not included on the NPL, such as the Hazardous Discharge Bond Act sites, were introduced into the schedule concurrently with those remedial actions proposed as an EPA lead site and in order of their HRS score. This reflects the additional manpower available at DEP when EPA has the lead for a remedial action and will provide for more timely cleanup of those sites not eligible for Superfund monies. All 27 Bond Act sites were included on the Plan. The eleven sites categorized as drum dumps were scheduled separately (Attachment D) because operations at these sites differ from those at other sites in the Plan. It is expected that these surface drum dump cleanups can be effectuated more rapidly than remedial action at other more complex sites. According to Superfund regulations, responsible parties are liable for cleanup costs. Accordingly, Attachment E lists most sites currently not scheduled primarily because of their responsible party enforcement status.

It is important to note that the cleanup of hazardous waste sites is an extremely complex undertaking. The scheduling of remedial actions is dependent upon many variables such as enforcement status, identification of additional sites having higher priorities, information altering the relative potential public and environmental hazards of sites previously identified, as well as a Federal/State cooperative effort. Thus, the schedule is not static and will be subject to continued revision. Additions, deletions or other schedule changes will be effectuated every six months in compliance with USEPA's "Guidance for Updating the National Priorities List". Annual public hearings will be held on these changes as well as in compliance with P.L. 1982, c.202, N.J.S.A. 58:10-23.15 (Assembly Bill 285) enacted in December 1982. This law requires the DEP to prepare a Master List of all the known hazardous discharge sites in the State and a ranking of the sites based on criteria recommended by the Hazardous Waste Advisory Council pursuant to P.L. 1983, c.222, N.J.S.A. 58:10-23.20, (Assembly Bill 1255) enacted on June 27, 1983.

The DEP will continue its program of identification and ranking of hazardous waste sites in New Jersey. The Hazardous Site Master List developed by the Department now consists of over 900 sites known or suspected to contain hazardous substances. Most of these sites are still to be evaluated. Although the task is enormous, the State is committed to a vigorous program of cleanup operations at hazardous waste sites in order to protect public health and the environment.

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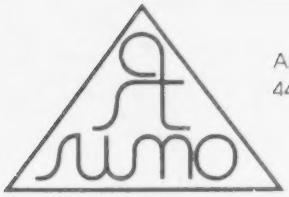


Association of State and Territorial Solid Waste Management Officials
444 North Capitol Street, N.W. • Washington, D.C. 20001 • 202-624-5828

TESTIMONY OF

CHARLES WILHELM

CHIEF OF THE DIVISION OF HAZARDOUS MATERIALS MANAGEMENT

OHIO ENVIRONMENTAL PROTECTION AGENCY

ON BEHALF OF THE

ASSOCIATION OF STATE AND TERRITORIAL

SOLID WASTE MANAGEMENT OFFICIALS

(ASTSWMO)

BEFORE THE

U.S. SENATE

COMMITTEE ON

ENVIRONMENT AND PUBLIC WORKS

APRIL 25, 1984

MR. CHAIRMAN AND MEMBERS OF THE U.S. SENATE COMMITTEE ON THE ENVIRONMENT AND PUBLIC WORKS. I AM CHARLES WILHELM, CHAIRMAN OF THE TASK FORCE ON THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 REAUTHORIZATION AMENDMENTS ESTABLISHED BY THE ASSOCIATION OF STATE AND TERRITORIAL SOLID WASTE MANAGEMENT OFFICIALS (ASTSWMO). I AM ALSO THE CHIEF OF THE DIVISION OF HAZARDOUS MATERIALS MANAGEMENT OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY. I APPRECIATE THE OPPORTUNITY THAT YOU EXTENDED TO ME ON BEHALF OF THE U.S. SENATE COMMITTEE ON THE ENVIRONMENT AND PUBLIC WORKS TO PRESENT THE ASTSWMO TASK FORCE'S PROPOSED CHANGES TO STRENGTHEN CERCLA DURING YOUR 1984 LEGISLATIVE SESSION.

YOU MAY KNOW THAT ON NOVEMBER 1, 1983, THE ASSOCIATION WAS INVITED BY U.S. HOUSE OF REPRESENTATIVES CHAIRMAN JAMES FLORIO TO PRESENT TESTIMONY CONCERNING "THE STRENGTHS AND WEAKNESSES OF THE PRESENT ACT, SUGGESTIONS FOR LEGISLATIVE CHANGES, AND WHAT IS THE PROPER ROLE FOR THE STATES IN THE SUPERFUND AREA." SUBSEQUENT TO THIS REQUEST FROM CONGRESSMAN FLORIO, WE MOVED QUICKLY AT ASTSWMO TO ESTABLISH A CERCLA REAUTHORIZATION TASK FORCE TO SOLICIT THE VIEWS OF OUR MEMBER STATES AT LARGE. ON NOVEMBER 10, I PRESENTED OUR ASTSWMO PRELIMINARY POSITION PAPER TO THE HOUSE SUBCOMMITTEE ON COMMERCE, TRANSPORTATION AND TOURISM. THIS TESTIMONY WAS BASED ON A SURVEY OF 11 STATES.

OUR TASK FORCE HAS SUBSEQUENTLY HAD THREE ADDITIONAL WORKING SESSIONS AND WE HAVE NOW RECEIVED SURVEY RESULTS BACK FROM ALL 50 STATES AND TERRITORIES. THE ASTSWMO POSITION PAPER THAT YOU HAVE BEFORE YOU TODAY, WHICH IS ATTACHED TO MY TESTIMONY, REFLECTS THESE SURVEY RESULTS FROM THE 50 STATES AND TERRITORIES AND OUR TASK FORCE WORKING SESSIONS. THESE SESSIONS WERE ALSO CLOSELY COORDINATED WITH THE NATIONAL GOVERNOR'S ASSOCIATION ENERGY AND ENVIRONMENT

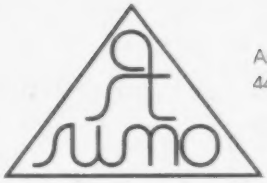
COMMITTEE. THE ASTSWMO POSITION PAPER THAT I AM PRESENTING TODAY WAS PRESENTED TO THE NGA ENERGY AND ENVIRONMENT COMMITTEE STAFF AT THEIR JANUARY 20, 1984 MEETING IN DENVER, COLORADO. I BELIEVE THAT THIS COORDINATED EFFORT IS REFLECTED IN THE FACT THAT OUR ASTSWMO AND THE NGA PAPERS ARE IN SUBSTANTIAL AGREEMENT.

ASTSWMO STRONGLY SUPPORTS THE REAUTHORIZATION AND STRENGTHENING OF CERCLA DURING 1984 AS OUTLINED IN OUR FINAL POSITION PAPER (ATTACHED). THESE ASTSWMO POSITIONS COVER BRIEFLY, RECOMMENDATIONS IN THE FOLLOWING AREAS:

1. REAUTHORIZATION AND EXPANSION OF THE RESPONSE TRUST FUND
2. STATE PROGRAM SUPPORT
3. 50% STATE MATCH
4. OPERATION AND MAINTENANCE COSTS
5. STATE FUNDS
6. HOW CLEAN IS CLEAN?
7. STATE MATCH CREDIT
8. PETROLEUM EXCLUSION
9. HEALTH STUDIES
10. HAZARD RANKING SYSTEM
11. IMMEDIATE REMOVAL
12. TIME LIMIT ON CLAIMS

ASTSWMO COMMENDS THE DETAILS OF OUR POSITION PAPER TO YOU AND YOUR U.S. SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE STAFF AS YOU DELIBERATE ON THE REAUTHORIZATION OF THIS EXCEEDINGLY IMPORTANT LEGISLATION.

THANK YOU FOR THE INVITATION TO APPEAR BEFORE YOU AND FOR THE OPPORTUNITY TO PRESENT THIS POSITION PAPER. IN BEHALF OF ASTSWMO, I WILL BE HAPPY TO ANSWER ANY QUESTIONS YOU MAY HAVE.



Association of State and Territorial Solid Waste Management Officials
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Position Paper

CERCLA Reauthorization

The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) has conducted a membership poll to reach a consensus position on provisions which should be included in any federal legislation introduced to reauthorize the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, or Superfund). The following positions received the widespread support of State hazardous waste management officials.

Reauthorization and Expansion of the Response Trust Fund

- The Hazardous Substance Response Trust Fund must be reauthorized for at least 5 years.
- The amount of the Fund should be increased to at least $9 billion (plus an increment for operation and maintenance as outlined below) so that it can address the sites on the National Priority List, proposed sites and new sites yet to be proposed, as well as the administrative cost to both EPA and the states in carrying out cleanup actions.
- The Trust Fund must be based on a stable funding source.

State Program Support

- Funds should be made available from the Trust Fund to the states, through direct 90-10 grants or other funding mechanism, to:

  -- support efforts to identify, assess, and investigate new sites;
  -- develop, implement, and maintain state contingency plans;
  -- provide additional staff for administration of a state program and state lead projects;
  -- support state health study efforts conducted in concert with or at the request of the Department of Health and Human Services; and,
  -- support state enforcement activities at National Priority List sites.

- Funds for staff support must be provided up front and separate from site specific cooperative agreements.

50% State Match

- The 50% state match requirement for removal and remedial actions at sites owned and/or operated by the state or political subdivision thereof must be changed to 10% as with all other sites.
- This modification must expressly apply to actions already initiated as well as future actions.

Operation and Maintenance Costs

- Authority must be granted for the Response Trust Fund to be used to support operation and maintenance costs at a site after remedial actions have been taken. A 10% state match requirement shall be used to help defray the cost to the fund of these activities.

- The cost effectiveness analysis for the project should be based on the whole cost of the remedial alternatives -- capital costs for construction plus operation and maintenance -- and not just the cost of construction.

- Operation and maintenance activities should be evaluated on a regular basis using risk assessment techniques to determine when these activities may safely be discontinued.

State Funds

- The preemptive language of Section 114(c) should be removed.

How Clean Is Clean?

- EPA, in close cooperation with the states, must be directed to develop a risk assessment methodology for evaluating hazardous substance facilities.

- This methodology should be used as one of the factors for determining the most cost effective remedial alternative.

- This effort should be completed in two years and be incorporated in the National Contingency Plan.

State Match Credit

- The conditions under which states may generate credits which can be used to offset the state match requirement for remedial actions must be changed.

- Changes should include:

  -- extension of the time period during which eligible costs can be accrued to the date of actual initiation of remedial action; and,
  -- use of excess state credit generated at one site to offset state match requirements at another site.

Petroleum Exclusion

- The petroleum exclusion must be modified to allow the Response Trust Fund to be used to address threats or potential threats to public health, welfare and the environment caused by petroleum products.

Health Studies

- Funds must be made available under CERCLA to bolster the health study efforts being made at hazardous substance facilities by the Department of Health and Human Services, Center for Disease Control.

Hazard Ranking System

- EPA should be directed to modify the Hazard Ranking System to allow additional emphasis to be placed on environmental damage; and/or,

- States should be allowed to add at least one site at which environmental damage has occurred to the National Priority List or a number of sites equal to 10% of the sites that state already has on the list (whichever is greater) regardless of how the site might otherwise rank.

Immediate Removal

- Through cooperative agreements, the states should be given the authority to spend up to $50,000 per incident from the Response Trust Fund for immediate removals.

Time Limit on Claims

- The three year time limit placed on the state's ability to seek damages or compensation from responsible parties for Fund sponsored action [Section 112(d)] should be removed or modified to start after rules or regulations adopted by the Department of Interior for assessing both short-term and long-term injury to, destruction of, or loss of any material resources have become effective.

- This modification should expressly allow claims initiated in the period after December 11, 1983 until the effective date of this legislation.

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

WEDNESDAY, MAY 16, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to recess, at 10:14 a.m., in room SD-406, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Humphrey, Evans, Randolph, Burdick, Mitchell, and Lautenberg.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Good morning. The Committee on Environment and Public Works will please come to order.

This is the committee's third hearing on the proposed reauthorization of Superfund. Today we will be privileged to hear from Governor Kean of New Jersey on behalf of himself and the National Governors' Association.

Next week the committee will hold three more hearings here in Washington. Then, on or about June 4, we plan to hold a hearing in the State of New Jersey. I hope that while the hearing process continues, the committee will be able to develop a legislative proposal which members can support so that markups can begin in early June. It is my intention to complete the reauthorization process in the Senate by August 1 if that is at all possible.

Unless we can extend the law this year, the supply of funds will begin to slacken and eventually stop well before October 1, 1985, which is the date on which the tax legally expires. To meet such an ambitious goal will require that we make the best possible use of that time.

With that in mind, I am going to invite Governor Kean to the witness table, following opening statements by my colleagues.

Senator Randolph, do you have an opening statement?

Senator RANDOLPH. I shall wait. It will be a little more appropriate a little later.

Senator STAFFORD. All right. Very good.

Senator Lautenberg, do you have an opening statement?

Senator LAUTENBERG. Yes.

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. I thank you, Mr. Chairman, for the opportunity and the privilege to welcome Governor Thomas Kean of the Garden State, my State, to this hearing.

I know that Senator Randolph is going to make some comments about having known the previous Kean in this area, but our Governor is the leader of a proud State, and we are proud of our Governor. He has been very interested in the issue that we are going to be addressing today.

New Jersey is a complex State, densely populated, the ninth largest State in the country, and we want to protect our environment, and at the same time we want our businesses and our jobs to be compatible with our interest in the environment.

I am pleased to welcome our Governor here. He is not only representing the State of New Jersey as its chief executive but also the Governors' Association. Tom Kean has taken a leadership role in the area of Superfund legislation and acid rain. I think it was last fall he convened a session of the Northeast Governors' Association on Superfund and acid rain. I am privileged to welcome you here, Tom, today to join us in the committee in, hopefully, finding a solution to a very serious problem that not only faces New Jersey but faces our entire country.

Thank you.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

Governor, let me join in welcoming you. We very much appreciate your being here. We know of your interest in these matters and we know of the involvement of your State, so we would be very pleased to hear your statement on behalf of yourself, your State, and the National Governors' Association.

STATEMENT OF HON. THOMAS H. KEAN, GOVERNOR, STATE OF NEW JERSEY

Governor KEAN. Good morning, Senator Stafford and members of the committee.

I very much appreciate this opportunity to testify before this committee regarding what I consider one of the two most pressing matters in an environmental sense that are facing this Nation today, and that is, of course, the cleanup of hazardous waste sites.

I am pleased to say that I represent not only my own State of New Jersey but also the National Governors' Association.

I think any Governor who came to testify before you could tell you that few issues so galvanize the public and few issues so concern them as the news that an old and often forgotten hazardous waste site has been discovered in their neighborhood, or that the landfill down the road is not sitting there stable but is actually leaking dangerous chemicals.

When these problems develop at the local level, the crisis is quickly felt in the office of the Governor and even in Washington.

Recognizing the need for a comprehensive national program dealing with these problems, Congress wisely enacted the Superfund Program in 1980. In New Jersey, we have the most sites on the national priority list, so we are particularly sensitive to this issue and

very aggressive in our State in identifying sites and initiating cleanup. But we can only do so much without necessary Federal help.

If my appearance today conveys just one message, let it be this: It is imperative that the Congress act quickly to reauthorize the Superfund Program this year and get the cleanup process moving.

Let me emphasize that the time to act is now. At the end of the current fiscal year, on September 30, the fiscal resources for continuing major cleanup efforts at tens if not hundreds of sites will begin grinding to a halt.

In fiscal year 1984, EPA budgeted $150 million for remedial action nationally. By contrast, New Jersey alone will require $108 million for fiscal year 1985, and New York State will require just about an equal amount. Thus, two States alone need more next year than the entire national budget set aside by EPA for this year.

If Superfund is not authorized by that time, some other mechanism must be put in place to allow State programs to continue. New Jersey Senators Lautenberg and Bradley have proposed one such mechanism which would provide States with credit for work done at Superfund sites with State funds. That credit could later be reclaimed for work on other sites when a reauthorization bill is in place.

Hence, I come before you today, really, with a twofold mission: First, to try to convince you of the need to rapidly reauthorize the Superfund; and, second, to implore your support for an alternative funding mechanism. Let me address these issues more specifically.

First of all, on the size of the fund, I believe, and the National Governors' Association policy resolution endorses this position, that the size of the fund available to address the problem of hazardous waste sites ought to be increased to at least $1.8 billion per year for 5 years, for a total of $9 billion. We believe that this level of resources is the minimum needed to address both sites currently on the national priorities list as well as sites likely to be added to the list in the next few years.

A number of congressional proposals would expand the current tax on petroleum and chemical feedstocks and introduce a new tax on waste disposal. The Governors strongly support expansion of the feedstock and petroleum taxes, since they provide a reliable revenue base for the fund.

We also encourage Congress to consider developing other dedicated revenue sources, and this, of course, could include a waste-end tax.

There are a number of critically important management issues associated gewith the Superfund Program. Perhaps the most serious is the need to allow New Jersey and other States to proceed with cleanup of sites included on the national priority list, using State funds when Federal funds are not available. This is especially important now as we approach fiscal year 1985 without reauthorization bill or an increased level of funding in place.

The nature of the hazardous waste problem is far too critical to delay action when a State has the resources to remove such threats on its own. Under this approach, States that proceeded would re-

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ceive a credit for eligible costs that could be applied to other listed sites in the State.

The granting of a credit would, of course, be subject to the authorization and appropriation of additional Federal funds. In this way, States would no longer be forced to postpone cleanup efforts—simply stop those efforts—because of uncertainty surrounding the timing or amount of Federal funding. An amendment to this effect is essential if States are to proceed expeditiously with their cleanup programs.

In fiscal year 1985, New Jersey's management plan calls for activity on 69 separate major sites. This will involve 144 separate design, engineering, and construction projects at a cost of $108 million in Federal dollars.

In fiscal year 1986, we will require $123 million to keep this program moving. It is absolutely essential that a credit mechanism be put in place before our program—and that of so many other States—is simply brought to a standstill.

While the current EPA management has been vigorously proceeding to implement Superfund and has been more than supportive of our efforts in New Jersey, I believe they face a significant problem. This year, for instance, when New Jersey simply had to have an extra $20 million to continue its program, Bill Ruckleshaus and Lee Thomas responded. Next year, there is no way they will be able to respond. They simply do not have the fiscal resources available. Their own projections of the number of studies, design and construction projects that will be initiated next year, when compared to the fiscal realities of Superfund, amply demonstrate this point.

We in New Jersey are willing to put up our own money to keep our cleanup program moving ahead. All we ask is that a fair credit program be put in place so that we are not unjustly penalized for our progress in moving ahead to clean up hazardous waste.

I am, first and foremost, here to support a speedy reauthorization bill with a large increase in authorized funding levels. However, the health and environment of my State are too important for me not to emphasize also the need for an insurance policy. That insurance policy is the Lautenberg-Bradley proposal.

A second important State management issue is the need to change the State match required for cleanup at sites which are owned by a State or local government. The Governors believe that the appropriate match for cleanup at these sites is 10 percent, the same as for other sites. A 10 percent share should be considered final settlement for all State or local liability.

Third, support is needed for State programs. Although Superfund is not designed to be delegated in the same manner as the air, water, or Resource Conservation and Recovery Act programs, the States nevertheless play an important role in implementing the Superfund program. Specifically, the States incur costs identifying and assessing sites, developing and administering their programs, and, of course, enforcing the law. Grant funds, similar to those awarded under the Resource Conservation and Recovery Act program, ought to be available to assist States in meeting their expenses. I believe crediting the States' administrative expenses

toward the 10 percent match would be a very effective way to support State programs and get them moving.

It is imperative that States have adequate resources to carry out their responsibilities under Superfund and to meet cleanup needs in the absence of EPA action. Many States have difficulty raising their share of Superfund cleanup costs. In addition, States need resources to deal with sites which are not listed on the National Priorities List. To develop these resources, States may wish to dedicate taxes on petroleum or chemical feedstock, waste disposal, or a number of other sources.

In New Jersey, for example, we have a State spill fund that is raised through a tax on hazardous substances and petroleum products. With this fund, we have already addressed hundreds of sites throughout the State, small sites that are not necessarily covered by Superfund. We feel very strongly that any kind of Federal preemption of such State taxes is totally inappropriate.

Language in section 114[c] of Superfund has fostered a great deal of litigation on this issue of preemption. We have spent a lot of time in court ourselves, as a State. We just don't believe that Congress had any intention of preempting State taxation; therefore, we request that that section of the law be completely repealed.

Under EPA's interpretation of the current law, the long-term operation and maintenance costs of remedial measures must be borne by the State after initial cleanup. This causes us a number of serious problems.

First of all, many States simply do not have the resources necessary for the perpetual care of these hazardous waste sites. Perhaps more importantly, failure to explicitly consider long-term operation and maintenance costs biases cost-effectiveness calculations and distorts EPA's selection of a cleanup plan.

For example, the most cost-effective remedy for a site with extensive groundwater contamination may appear to be a quick fix of surface contamination, with the State left responsible for a very costly operation and maintenance program designed to clean up the subsurface. That kind of solution is not right and is in fact not even cost effective in the long run.

Therefore, we strongly recommend that the trust fund should be used to support operation and maintenance costs over their expected life. These expenditures should be subject to the same 90/10 State match requirements as the initial cleanup measures.

As you are aware, EPA currently makes the decision on how clean is clean enough on a site-specific basis, considering cost effectiveness and other factors. We believe that responsible parties, the States, and EPA itself have been hampered in site cleanup decisions by the lack of clear definition of how clean is clean.

Quite simply, neither the Government nor the public nor the responsible party know what is to be expected under this kind of system. We believe EPA should be directed to work with the States to develop criteria or guidelines on those measures which are acceptable to protect public health and to protect our environment.

The Governors are also very concerned that in future years significant problems will develop with hazardous waste sites which close under the Resource Conservation and Recovery Act. Some

provision needs to be made to ensure monitoring, maintenance, and remedial action if necessary at those particular sites.

The post-closure liability fund established to provide those safeguards simply has not been adequately funded. The Governors' recommendation is that it be at least doubled in size and that the liability period for responsible parties be extended from 5 to 30 years.

In addition, EPA should be directed to review insurance requirements for owners and operators of hazardous waste facilities to ensure that for at least a 30-year period following closure, sufficient resources will be available to perform monitoring and to take whatever corrective measures may be necessary.

I am aware of proposals to incorporate the post-closure fund into the Superfund itself, and of concerns that the post-closure fund essentially lets responsible parties, in a sense, "off the hook." I can assure you that the Governors recognize the need to collect against responsible parties where they exist, but we also believe that some funding mechanism must be available for use when there simply aren't any responsible parties or when their resources are not adequate to do the job.

Superfund is aimed at a different universe of sites, some of which rank among the most dangerous in our entire country. Many of the post-closure sites with which we are concerned will not get onto the national priority list; nevertheless, they represent serious public health concerns. Some mechanism must be available to clean them up.

The 3-year period provided by Superfund for States to file claims for damages to natural resources expired before the Environmental Protection Agency and the Department of the Interior had published the guidelines necessary to file such claims. We believe it is important to provide compensation for damages to natural resources. The Department of the Interior should be directed to publish the necessary guidelines expeditiously, and the opportunity for the States to file such claims should be extended to at least 5 years after these guidelines are published.

The Governors were very concerned when, in the early years of the Superfund program, the EPA sometimes pursued seemingly endless negotiations with responsible parties over certain site cleanups. We support the current EPA philosophy of cleaning up first and then going back to recover the costs.

In addition, the current practice whereby the States and the Federal Government litigate separately to recover their respective shares of cleanup costs is duplicative and therefore wasteful. Rather, the States and the EPA should be directed to agree that one or the other ought to take the lead in litigation for full recovery of both the State and the Federal share. The appropriate share should then be returned to the State or Federal partner.

Any amendments in this regard should, of course, make clear that States already have a cause of action to recover costs at sites where they have contributed matching funds.

In conclusion, Mr. Chairman, as you are aware, one of the important items of business at the National Governors' Association's recent midwinter meeting was the adoption of a policy position on the reauthorization of Superfund. The policy statement, a copy of

which I have attached to my testimony, was unanimously approved by all the Governors.

In developing this position, we solicited the views of businesses, environmental groups, and health officials, as well as members of the Association of State and Territorial Solid Waste Management Officials. I mention that process to emphasize that the Governors' position represents a strong consensus among elected officials who have primary responsibility for environmental and public health protection.

The Governors' position on Superfund, which I have outlined for you today, is a call to act now to reauthorize the law, to expand the trust fund significantly so that resources are commensurate with the problems we face, and to correct a number of deficiencies in the present law so that the cleanup process is faster and more efficient.

The Governors' major concern is that public health and the environment be protected. We are convinced that such protection requires a major commitment of resources from business, the Federal Government, and from the States.

The Governors strongly support increasing the Superfund to at least $1.8 billion per year over a 5-year period. We are delighted that several bills have been introduced which recognize the need to change the current law in ways basically compatible with our recommendations and look forward to working with you in the months ahead to pass this important legislation.

Mr. Chairman and members of the committee, I have very much appreciated this opportunity to appear before you today to give my views and the views of the Governors of this country.

Senator STAFFORD. Thank you very much, Governor Kean.

It would be my suggestion to my colleagues that, in view of the usual time constraints, we limit ourselves to 10 minutes each on the first round and then consider whether a second round is necessary when we have completed the first one. If there is no objection, we will proceed in that way.

Governor, you probably know that the administration as well as some business and industrial groups are opposed to reauthorization of Superfund this year. Their view is we need an additional year's experience with the Superfund before we can be sure of the areas where amendments are truly necessary.

They also say that in 1985 several additional studies will become available which will reveal flaws, if any, in the law.

New Jersey probably has had more experience with Superfund than any other State. In addition, you had one of the first and most aggressive State Superfund programs. In your judgment, will 1 more year's experience be worth the price of delaying the law's reauthorization, and even though you have commented on this briefly in your testimony, could you provide more detail on what the impact of a delay might be in New Jersey and the other States with which you are familiar?

Governor KEAN. Absolutely. I believe that it would be tragic if reauthorization were delayed. I don't believe any benefits from future studies would have the kind of impact that delay would have. At the end of the Federal fiscal year, on September 30, the fiscal resources for continuing major cleanup efforts at hundreds of

sites all around this country will begin grinding to a halt; they will simply stop. And if they stop, of course, that groundwater pollution and everything else is simply going to continue.

In fiscal year 1984, EPA budgeted $150 million for remedial action nationally. Now, contrast that with New Jersey's requirements for $108 million in fiscal year 1985.

And, as I said in my testimony, New York State has got just about a similar need. Thus, two States alone need more next year than the entire national budget set aside by EPA for this year.

In fiscal year 1985, to give you some of New Jersey's experience, New Jersey's management plan calls for activity on 69 separate major sites. This will involve $144 separate design, engineering, and construction projects at a cost of $108 million in Federal dollars. Fiscal year 1986 will require $123 million simply to keep the program moving. It is therefore absolutely essential that a reauthorization bill and a credit mechanism be in place quickly if this entire program is not simply going to stop.

So I do not see any way, in good conscience, that we can wait and allow these programs, which are ongoing, to simply stop for lack of money.

Senator STAFFORD. Thank you, Governor.

I note that you suggest that the preemption provision of Superfund law be repealed. When we drafted the provision in 1980, we intended that it be very narrowly construed. It was to preempt States only when Federal law provided complete response and compensation coverage, including payments to victims for their injuries as well as pain and suffering.

We also intended to preempt States only when the Federal system was assuming 100 percent of the response and compensation cost. Our view was that in the absence of complete Federal coverage, States should be free to establish their own liability compensation and taxing laws.

I take it from your comments that despite our good intentions, the presence of the preemption clause is casting a shadow over the right of State and local governments to respond to Superfund problems. Although, again, you have commented earlier, I will ask you directly, would it greatly simplify your task if we repealed this provision altogether?

Governor KEAN. It would be very, very helpful to us because the wording of the provision has been open to legal challenge and has involved our State and a number of States in court for long periods of time, at great expense.

We are moving very rapidly in New Jersey—as rapidly, I believe, as any other State in the country, but other States are moving too—to use our own monies to clean up sites that are not covered by Superfund. We call them small drum sites. We have cleaned up over 100 of them using our own funds, and yet we are always challenged by the wording that could preempt us. So it would be very, very helpful if that wording were simply stricken from the law.

Senator STAFFORD. You suggest, Governor, that the Congress should establish explicit criteria for determining to what degree any given site should be cleaned up. Do you or your staff have any suggestions as to what those criteria could be? I would say that if

you prefer to answer that in writing, it would be agreeable, either way you wish to do it.

Governor KEAN. I think, actually, we probably would rather do that in writing, because that would be something I would rather talk with our DEP people and get something detailed.

Senator STAFFORD. Certainly. That would be most agreeable to us.

Senator STAFFORD. One of your recommendations is that the Superfund assume responsibility for 90 percent of the operation and maintenance costs. Since you know that some sites will require maintenance for decades, does your recommendation imply that Superfund laws should be extended indefinitely, or would your advice be to reauthorize the law for another 4 or 5 years so the way is left open for further amendments in 1988 or 1989 if future experience indicates that is desirable?

Governor KEAN. Well, our immediate call, of course, is for reauthorization. But my own feeling and our own experience in New Jersey would lead me to believe that we are going to need a Superfund a lot longer than 5 or 6 years.

We are, we believe, ahead of most other States in actually looking for and discovering what we were dumping for decades without knowing. We believe increasingly that more and more States around this country are going to discover hazardous wastes and discover, therefore, more and more Superfund sites. So my feeling is that this is not something which is going to be solved in 4 or 5 years; it is something which is going to be ongoing. And because the cost of maintenance is, in many cases, more than the cost of cleanup, then there could be problems on that in the future unless that is included in the Superfund.

Senator STAFFORD. Thank you very much, Governor.

I am inclined to agree with you, personally, that we will need it for more than 5 years, but I am somewhat inclined to the belief at this point that a forced chance to reexamine it in 5 years might be a desirable thing, too.

Governor KEAN. That is fine. I have no problem with that at all.

Senator STAFFORD. I will turn now to my colleagues, and I would also remind them that it has been the custom in this committee to recognize Senators, outside of the chairman emeritus of the committee, in the order in which they appeared. We can always change that if colleagues want to do so, but that has been the custom of the committee, and I would adhere to it this morning unless there is a desire not to.

I am going to recognize the chairman emeritus, who taught me what little I know about running a committee.

Senator RANDOLPH. Mr. Chairman, you were not only a good learner, but you, in your own right, were far ahead of me.

You had someone in your family by the name of Robert Winthrop Kean; is that correct?

Governor KEAN. Yes; that was my father.

Senator RANDOLPH. Yes. He served here from 1939 to 1959 in the House of Representatives.

Governor KEAN. That is correct, yes, sir.

Senator RANDOLPH. Now, I guess I would call myself a long-time New Dealer, but I was here 6 years prior to your father's coming. I

remember our pleasant working agreements on many subjects, not political, but working to strengthen especially the highway programs of this country.

Governor KEAN. That is right.

Senator RANDOLPH. He made a very supportive contribution to that effort, as well as in other committee assignments and concerns that he had.

I have always remembered, from the first day you took office, I said to myself, "He had a good father; I want him to make a good Governor."

Governor KEAN. Thank you very much.

Senator RANDOLPH. Now, Governor, you and the other Governors have many useful suggestions. I think that you, today, have made two very helpful suggestions. The need for support of State Superfund efforts is abundantly clear by what you have indicated, and then you have asked us—and naturally you would—that we seek some way to respond to the greater increasing need. Is that correct?

Governor KEAN. That is correct, Senator.

Senator RANDOLPH. I listened carefully to your comments on the postclosure liability fund and know what you have said. This continues to be a valuable part of the law, and your suggestions on how to improve that law, I think, are most welcome by all of us.

Would you expand on perhaps one or two or three of these points?

Governor KEAN. Well, the main suggestion, of course, is that the postclosure be properly funded, because we don't believe the money is adequate within the postclosure fund at the present time.

I have with me George Tyler from our department of environmental protection, my assistant commissioner.

Mr. TYLER. Thank you, Senator.

We would also like to see the fund extended in time from the present 5-year period to a 30-year period, which is more compatible with the kinds of concerns we have for these sites. We have also asked for an increase in the regulatory requirements associated with these sites, particularly with respect to insurance that might be available to remedy problems that could develop over the long term.

Senator RANDOLPH. Governor, I have looked into this; I think it takes more study. I am not summarily saying it is not a good idea, but I think, without going into it, saving the time of the committee, we do have it under study, and I think it has elements of value.

Mr. TYLER. Thank you.

Senator RANDOLPH. Is there any other point?

Mr. TYLER. I have nothing further, Senator.

Senator RANDOLPH. Thank you.

I took my older son to an area along your coastline one time, Asbury Park. I remember we rented a room in one of the homes there. I don't know whether they still do that, I am not sure, but it wasn't a hotel. We got a good rate, and we stayed 5 days. It was a great experience. My son at that time was 14.

I have been back to Asbury Park since, and I saw deterioration take place. What is the trouble with Asbury Park? I am not critical, but I see the changes, and they are not good.

Governor KEAN. No. There has been deterioration in Asbury Park which basically is the same problems that affect a number of our older cities: deterioration in infrastructure; people moving, frankly, further down the coast. Some of the other resorts that are a little further down our coast are now much more popular than Asbury. There is an increasingly older group of people who still come to Asbury in the summer. The younger group is apt to go to other places.

We are working on a number of things revolving around the city's infrastructure, and restoring some of the things that have deteriorated to the extent that Asbury Park doesn't attract people the way it used to. But we believe that Asbury Park can come back. We believe Asbury Park has had a great past and has a great future, and we are trying to do certain things in the State and, for the first time, with our tourist industry, to attact people back to Asbury.

Senator RANDOLPH. Well, I hope that will happen.

That resort next door, I remember, was more or less religious in nature.

Governor KEAN. Yes; that is right.

Senator LAUTENBERG. Ocean Grove.

Senator RANDOLPH. Ocean Grove.

Governor KEAN. Ocean Grove, and it is still there.

Senator RANDOLPH. And you couldn't drive the car in on Sunday, as I recall.

Governor KEAN. We have had some problems with the courts over that.

Senator LAUTENBERG. It is harder to get a drink than to drive a car.

Senator RANDOLPH. Well, this hearing covers a wide range of subject matter.

But, to continue, I want to say that this past summer I was there, and I saw the old merry-go-round, and it is still in operation, with a new coat of paint, after 50 years. So keep it turning, will you, sir?

Governor KEAN. That is what we have to do.

Senator RANDOLPH. Thank you, Governor.

Governor KEAN. Thank you very much. I hope you will come back to the shore this summer.

Senator RANDOLPH. I will do it. Colt's Neck.

Governor KEAN. Good.

Senator STAFFORD. Thank you very much, Senator Randolph.

Senator Lautenberg?

Senator LAUTENBERG. It is always a pleasure to sit with Senator Randolph. He knows so much about the history of our country, and when he talks about your dad, Tom, he means it. We invite Senator Randolph and his family back to New Jersey. We guarantee you cheap rooms again, nice rooms, good ocean view.

Senator BURDICK. Same place?

Senator LAUTENBERG. Same price. We can guarantee that.

And also, I would tell you that if our cleanup efforts continue you will be looking at the most beautiful ocean and the finest beach. Part of what we are doing today affects that directly and indirectly.

Tom, one of the things that is very much on our agenda here is the reauthorization and, of course, the increased funding. They are, as far as I am concerned, synonymous.

EPA has said that they are commissioning studies, that reports are due, required by the end of this year, by December.

Do you think that we need study the problems any further? Do we have enough evidence at hand to say, Listen, enough of the studies? We welcome all studies because it will help us, perhaps, direct our efforts a little more clearly. But in terms of this reauthorization, can you envision a situation that would suggest that we ought to delay this reauthorization process?

Governor KEAN. I know the studies that you are talking about. I know of nobody who is informed on those studies who would even suggest that those studies are going to say the fund should not be reauthorized, and reauthorized at a much higher level. To wait for further study at this point is simply going to give us a very well documented environmental disaster, not only in New Jersey but in a number of other places around the country.

We, in New Jersey, may have been ahead of the country in locating and starting to clean up these hazardous waste sites, these Superfund sites, but the rest of the country is catching up. There is going to be a much greater need from other States this coming year and increasing the year after that, everybody agrees on these facts. These facts demand the immediate reauthorization of Superfund and that we not wait for any further study. It would be tragic if we waited and any further ground water was contaminated because of that wait.

Senator LAUTENBERG. The Governor's comments here are those that we constantly hear, and I, for the life of me, cannot figure out, Mr. Chairman, why we cannot get this reauthorization behind us. Everybody agrees that the need is there. Everybody agrees, including the Administrator, when he sat here, that $1.6 billion is insufficient, even in addition to the base funding, so that we ought to get on with this.

Governor, since you are not only representing our wonderful State but you are representing your colleagues, other Governors around the country, in this matter, I would urge that you encourage them to continue to put the pressure on wherever they can. This is not a partisan issue at all, but the weight of 50 States calling for help is indeed impressive, and I commend you for your leadership.

When we talk about New Jersey, I think it is important to mention that a large part of our State is served by sole-source aquifers. Hundreds of people rely on this source for water. The more we investigate abandoned sites, the more we find that drinking water is contaminated or threatened. How great a problem is this in our State?

Governor KEAN. It is hard to quantify, but I think it would be conservative to say that at least 50 percent of the sites that we are talking about involve known ground water contamination. I suspect the figure may be higher than that, but at least 50 percent involve ground water contamination. Of course, nobody knows where aquifers run, really. We don't know where they run under the Northeast or under most parts of this country, so when you

contaminate ground water, you are not sure in which freshwater source that contamination is going to show up; it may show up in another State. It may show up in another region.

When you contaminate ground water, particularly with some of the hazardous chemicals we are talking about, we don't know what damage we are causing. So every minute that we gain in sealing off these sites, in stopping this ground water contamination, is a very, very important moment and one that is not only going to help us in terms of health but in terms of cost. It is much more difficult after the ground water contamination has occurred to clean up a site. Then we may be forced to put people, who may be living in homes they lived in all their lives, on bottled water, as we have done in some areas of New Jersey.

Senator LAUTENBERG. There was testimony here some weeks ago by families from the State of Massachusetts, and by no means is that a Massachusetts problem, but it is manifest in its worst form there. There were families who sat at that table, half a dozen of them, who either lost children or had children very sick with leukemia and a foul drinking water supply.

One woman sat there, and she said,

> When you take a 7-year-old bald child out into the world at large, as a result of chemotherapy, the pain and the suffering are unimaginable. Then when you take that child into a room full of 7-year-old bald children, you see how critical this problem is.

We don't want to see that. The financial costs are secondary when we look at the human costs. I am pleased, Governor, to tell you that Chairman Stafford of this committee has agreed to hold hearings in the State of New Jersey. We are looking for an early June date, and I am grateful for the chairman's willingness to do that, to help examine the problems directly.

I don't know whether we are keeping time here, Mr. Chairman.

Senator STAFFORD. Yes; you have 2 minutes left.

Senator LAUTENBERG. All right.

Governor, would requiring EPA to fund 90 percent of the operating and maintenance costs that you suggest, as well as the initial capital cost—is that as critical a factor, in your judgment, including any staff comments? Can we get by just cleaning up the sites and taking care of that?

Governor KEAN. No; we believe that is vital because, depending on the site, the cost of long-term maintenance may well be greater than the cost of initial cleanup. So States that may be hard pressed financially just are not going to be able to take on that obligation without the help of the Superfund. If you clean up a site and don't maintain it, you haven't done the job, and the ground water contamination is going to continue. So maintenance is a vital, vital part of the whole Superfund process, and so we believe this particular recommendation is a very, very important part of the overall picture.

Senator LAUTENBERG. In closing my moments here, Governor, it is important to mention our pride in New Jersey and our service in New Jersey. Our State is a State that is energetic in terms of industry, energetic in terms of creating opportunities, and a place that underscores the need for business and the environment to live compatibly.

We have a lot of companies that are in the chemical business, petrochemical business, and we start to see them understanding and sharing the problem with us. It is not at all a matter of conflict, I think you would agree, because no executive, no management, wants to move his or her company into an area with a contaminated environment. And I say this to my colleagues from all States—who is going to move a family into an area where they think the drinking supply might be contaminated, the air polluted, the ground contaminated? It is not going to happen.

So we are not at odds in this thing. It is a national fight that we have to conduct.

Governor, I have run out of time. I am pleased to see you here in our official relationship. I enjoy our personal relationship, and thank you, Mr. Chairman.

Governor KEAN. I might just add one thing, Senator, to your comment there.

In the area of Superfund, the business community in New Jersey has been totally supportive of our efforts. They have been very, very helpful in the cleanups.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Lautenberg.

Senator Evans.

Senator EVANS. Thank you, Mr. Chairman.

Governor, it is a delight to see a Governor up here before this committee. I, for many years, sat on the other side of the table.

You laid a fairly heavy one on us today in terms of the advocacy of substantially more for cleanup, for the necessary maintenance and operation. I think you hit on a very strong point, that we cannot assume that this is a one-time operation.

You talked about the necessity for greater attention to post-closure liability, reducing matching requirements and not preempting local taxes, and that all adds up to a whole lot of new money at a time when we are struggling right now in the Senate to figure out how we are going to reduce the $200 billion deficit, and that all comes down to, it seems to me, more specific ideas and concepts as to where is equity and where should we be gathering the necessary resources to do this job.

I agree with you that it needs to be done faster than we have been doing it. We are not likely to do that unless we have the resources.

Has the National Governors' Association, or has New Jersey, or has anyone at the State level taken a look at that part of the problem? Assuming we do need money in the fund of the size you have suggested, where do we get it and where do we get it equitably?

Governor KEAN. Well, we have looked at that, as I know you have, and nobody is suggesting that this kind of program be added to the problems that you are struggling with on the national debt.

A number of the proposals I know would expand the current tax on petroleum or on chemical feedstocks. A new tax on waste disposal, a waste-end tax, is something that has been suggested. Any of these things, I believe, are acceptable to the Governors because they all supply a reliable and a consistent funding source over the years.

We are not asking that this money come out of current Federal appropriations. We recognize your problem, and we support you in your efforts to deal with it. So we are supporting reliable methods of funding year by year which would come from one of the sources that I mentioned. But there may be a number of other sources. I don't think anybody who has looked at the debt or anything else has suggested that it should be allowed to slow this program down. It is too essential in terms of human health and other things.

Senator EVANS. I appreciate that. If we are going to expand a tax on those who produce materials or use materials which are toxic, we have concentrated, it seems to me, pretty much on one set of industries within a much wider range of polluters, and it would be helpful all the way around if we can figure out how to, as equitably as possible, distribute that tax burden and yet get enough money.

I am concerned about the waste-end taxes. It seems to me that the higher you raise those, the more likelihood, especially from small industries, there is that some "midnight dumping" might be done. That is a problem that I think may well come out of an extensive waste-end tax.

Governor KEAN. It could, and I recognize that problem. That is probably one of the reasons why the Governors, up to this point, have recognized that as a possibility but have not supported it. The Governors so far have strongly supported an expansion of the feedstock and petroleum taxes. But anything which would spread that burden in a fairer way, we would support. The only thing that would concern us is if considerations of that kind delayed the overall reauthorization to the point where the program slowed down or stopped. But we would support any kind of fair extension of the burden.

Senator EVANS. As I remember—and maybe the staff has the numbers immediately available—the current amount raised from that tax, however, to bring in sufficient revenues to get to the $1.8 billion a year you suggest, would have to be increased, what, about five times, something like that?

Senator STAFFORD. At least four times.

Senator EVANS. Yes. So it seems to me there is an urgent necessity to broaden that tax base if we are going to get the kind of resources we need, and any help along that line would be appreciated.

But one other element on taxation. You mentioned the concern over preemption, and that is, indeed, a concern. To the degree that any broadening of a Federal tax, however, gets to fees on polluters where you are either competing with States or municipalities in that form of taxation, if you don't preempt, you are competing with them. That, too, it seems to me, would be helpful for you to suggest, if there is a way to work either in conjunction with State and local communities or whether we just need to stay completely out of that source of revenue and leave it entirely to States and local communities.

Governor KEAN. We would like to see the preemption statute stricken out because whatever way it is worded, it seems to lead to litigation, and every time there is litigation, of course, it puts our efforts into question. Just as you are working, as you should, on the very worst sites, the major sites for Superfund, there are still hun-

dreds and hundreds of smaller sites which are never going to receive Federal funding, but which States feel they have an obligation to clean up, because they represent drums of chemicals. They are very costly. We can do that at the State level, but only if we establish a fund to do it, one that is not preempted. I think if that preemption clause were not there, many other States would be establishing their own funds the way New Jersey has, and they would be cleaning up a lot of these smaller sites before they get to be major sites and before they get to be the kinds of sites that would have to go on Superfund.

Senator EVANS. It seems to me there are two things to be considered. One is the preemption part of it; the other is just simply competition. If we didn't preempt but then were into the same field, then it may also create a problem for States to establish their local funds, just being afraid of double taxation or overtaxation in the particular field.

Governor KEAN. It could, but preemption is our major problem.

Senator EVANS. Yes.

One final thing. On the local sites that you mentioned, or the small sites, do you have any feel for how we should divide that responsibility? If there is a national need or an overall need to clean up sites, whether large or small, where should the Superfund and the National Government be primarily involved, and at what level or what point should it be the local community or the State involved?

Governor KEAN. Well, we believe the kind of mechanism that now exists is adequate. We have gotten a number of sites onto the Superfund list by going and presenting the magnitude of the problems the size of the site. And then EPA, looking at that, says yes, you are right; that should go on the national priority list; that should become a Superfund site.

We do not present the smaller sites because, one, they wouldn't make the list anyway, and second, we believe that is our responsibility, and we will carry out our responsibility in New Jersey and, I believe, other States will also. But again, carrying out that responsibility is dependent on our being given the mechanism to do so, which means establishing our own funds in the States.

Senator EVANS. So you are generally satisfied with the current way in which we can divide that responsibility?

Governor KEAN. We have had a very good working relationship with Mr. Ruckelshaus and most recently with EPA. Our problem with them is that they don't have the money.

Senator EVANS. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Evans.

Senator Burdick.

Senator BURDICK. Thank you, Mr. Chairman.

Welcome to the committee, Governor.

Governor KEAN. Thank you, sir.

Senator BURDICK. I guess we are all in agreement that we have got to do something. The question here is putting the nuts and bolts together and finding some way to pay for it.

I would like to get the rationale which you have expressed here today on whose responsibility this is. You suggested that the con-

struction should be divided 90-10, with the Federal Government paying for the maintenance.

Well, out of this committee—I will just give you a couple of examples—we have had disaster legislation where the Federal Government goes in and, up until recently, paid 100 percent of the replacement cost of a bridge, but thereafter, they turned it over to the local community. We build primary and secondary roads, city and country roads all over the country, but it is the primary responsibility of the State to maintain them, and it is no little matter.

Now, what is the rationale for not requiring the States to maintain these sites after they are once cleaned up?

Governor KEAN. We believe, first of all, that in many States the cost of maintenance over the years would be beyond the ability of the States to carry out. The maintenance cost, after all, is keeping the site sealed off, keeping that ground water pollution from occurring, and is in fact more expensive in many cases than cleaning up the site itself.

If we do not allow these activities to be covered by a national fund, that is an ongoing fund with an ongoing responsibility, I think we jeopardize the very work that Superfund does. There would be the danger of these responsibilities not being carried out, as States in some cases will not be able—in times, let's say, of economic problems—to provide funds out of general State revenues.

Having a consistent source of revenue established at the Federal level which would be available to maintain these sites, with the State having their portion of the obligation also, would guarantee that the Federal Government would not first come in with money and then in fact have additional problems 5 years down the road because of a State not maintaining it properly: Simply not having the rescurces to do it.

It is the way to get sites not only cleaned up but maintained, and we believe it is the best way.

Senator BURDICK. I understand that perfectly well, but would you suggest the same formula for maintenance of A and B primary and secondary roads in the States?

Governor KEAN. No, but I don't think it is the same. A road becomes the responsibility of the State, and we accept that as Governors. There is a difference—a road is a State-specific problem, and each State has safety standards that they have to maintain by Federal regulation. But the health problems are problems which go well beyond regions, that go into areas in which we cannot foresee—I mean, we don't know when a Superfund site pollutes water in one State, whether or not we are in fact creating health hazards in another State. It is a unique and a very, very difficult problem.

George Tyler from our department would like to comment on this.

Mr. TYLER. Senator, "maintenance" in this case may be something of a misnomer. Unlike a highway or a bridge, maintenance in a Superfund site very often is really continued cleanup.

Senator BURDICK. Pull that microphone a little closer to you.

Mr. TYLER. I am sorry, Senator.

I was saying that "maintenance" on a Superfund site is something of a misnomer. It is not like a bridge or a highway that just

sits there and needs to be kept in shape; maintenance is really continued cleanup over the long term. It is just the very nature of ground water contamination that you cannot clean it up on a shortterm basis, but the cleanup has to be maintained for many, many years.

Senator BURDICK. Well, I don't necessarily disagree with you. I want to get the rationale because we are going to have a big expense here that is going years and years into the future, you understand.

Mr. TYLER. Absolutely.

Senator BURDICK. And we should have some estimate of what this may cost us. The Federal Government has a little problem right now.

Governor KEAN. We are not trying to tap into that problem, and we would not. But we see this as an ongoing problem for all of us through the end of the century and beyond; we see this as a problem that is increasing.

Although there are States like New Jersey which has moved aggressively into the forefront of trying to identify and start cleaning up these sites, many of the other States are just getting under way. You are going to hear more and more from other Governors and other States who are finding out they have major problems that they have not yet identified but will be identifying over the next 2 or 3 or 4 years. And so the problem is not going to diminish; the problem is going to worsen. If we do not have the mechanism in place to deal with it, then there are going to be very, very serious problems for us all.

Senator BURDICK. Well, I think I will close my examination with a very important fact which doesn't have to be in the record, that when your father left the Congress, I entered. Did you know that? It was in 1959.

Thank you.

Senator STAFFORD. Thank you, Senator Burdick.

I came here just as he was leaving, too, I guess.

Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman.

Governor, it is a pleasure to see you again.

Governor KEAN. It is nice to see you again, Senator.

Senator MITCHELL. Thank you for your statement.

In your statement, you make brief reference to the actual resource damage claims, the need for the States to be able to file claims for damages to natural resources which occur in their States.

As you know, current Superfund law does not provide compensation for injury to human beings, and I have long argued that that builds into our law an irrational and unjustified national priority which places damage to property above damage to human beings.

Section 301(e) of the Superfund law authorized the study of the adequacy of existing legal remedies for individuals injured, and the study was completed last September and confirmed a view that I and others had held. I will just read briefly one sentence from it. It said that, although causes of action do exist for some plaintiffs, under some circumstances, a private litigant faces substantial substantive and procedural barriers in an action to recover damages

for personal injury due to hazardous waste, particularly where the individual claims are relatively small.

I have introduced two bills to deal with that. I would like to ask you—and you will be free, if you choose to either respond personally now or to respond later in writing if you would prefer that—but I would ask if you are familiar with the conclusions of the study, and do you have any view on the question generally of victim compensation as part of the Superfund?

Governor KEAN. I will respond in general, because I am not as familiar as I should be with the specific. In general, I am very supportive of your efforts and others to include moneys for victims' compensation. But I would hope that those efforts would not in any way delay the reauthorization of the Superfund. That would be my only caveat.

I think these efforts are justified. I think these efforts should be supported. But, in the meantime, I hope that none of these efforts would in any way stop the reauthorization of the Superfund this year or delay it.

Senator MITCHELL. Unfortunately, that is precisely what occurred in 1980. The legislation as reported out of this committee included a victim compensation provision. It came to the floor very late in the year, and the opponents of the legislation threatened to filibuster the entire legislation unless the victim compensation provision were dropped, and that occurred, and we have been unable since then to get it in. But I appreciate your concern.

I would like to go now to a second area, and that is the size of the fund. You have recommended a funding level of $1.8 billion a year over 5 years, which is, of course, a $9 billion total reauthorization.

You did note in your written statement that that recommendation of yours was made prior to the December report by the EPA Superfund task force which estimated that between $8.4 billion and $16 billion would be required to do the job. I would ask you, if you will, on behalf of the Governors' Conference, to consult with your associates and advise us subsequently whether you wish to revise your recommendation in the light of the report by the EPA Superfund task force.

Governor KEAN. I will say, Senator, talking personally now, because I cannot talk for the other Governors without authorization that I always thought that figure was low, based simply on our experiences in New Jersey and on the knowledge that other States have not moved as fast as New Jersey and that they are going to be discovering that they have serious problems that they did not suspect. As those problems are discovered—and they are being discovered every day and they will be discovered increasingly over the next 3 or 4 years—my feeling is that that figure will rise well above the $9 billion level. That is my own private point of view. I would have to go back to the Governors' Association to get that figure revised, which I will try to do.

Senator MITCHELL. And I would ask you also, at the same time, to provide your analysis and rebuttal, if you deem it appropriate, to the approach of the Chemical Manufacturers Association. Mr. Holmer will testify following you, and the reason I ask you now is that I will not have a chance to ask you.

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He makes what, I think, in fairness to him, on its face appears to be a persuasive argument that in determining the appropriate level of funding, the crucial factor is the rate at which the funds can be effectively expended on an annual basis by EPA, and that ought to be a limiting factor; that you can only look at the total universe and say this is what has to be done, and therefore provide these funds, and he sites in support of that position the statements by Mr. Ruckelshaus.

I hope I have accurately characterized Mr. Holmer's argument. He will be up here briefly and have a chance to make it more fully. I would like to have the benefit of both points of view, not only stated at the outset but in responding to each other, since that is significantly different from the point of view which you have expressed on behalf of the Governors.

So I would like to ask you to, at a subsequent time, respond in writing with a rebuttal of that position, why it is that we ought not to accept the point of view expressed by Mr. Holmer and why we should accept the point of view expressed by the Governors. I would appreciate your doing that.

Governor KEAN. We will be glad to do that, Senator.

My off-the-cuff feeling would be that as more States come up to the point that New Jersey is at now, they will in fact be very ready to spend the funds that are available to them.

Senator MITCHELL. You commented briefly on cleanup standards, and it is not quite clear to me. I gather that what you would like is some legislation that establishes national criteria but leaves the specific implementation to the EPA and the State.

Governor KEAN. Yes; we would just like some clearer definition of how clean is clean, so that we all know exactly what we are doing and where we are.

Senator MITCHELL. But basically, you feel that there ought to be some national standards set forth which, while not dictating the precise measures at each site, provide some criteria which must be utilized in determining the level of cleanup at each site. Is that a fair understanding of your position?

Governor KEAN. Yes; that is very accurate, and I believe it is very important.

Senator MITCHELL. One other matter I would like to ask within the remaining time I have is, some have suggested that in order to speed cleanup at sites, the law should establish deadlines by which various actions must be taken at sites; for example, within 5 years, all of the 546 sites now on the priority list must be cleaned up. As you know, the priority list will be expanded significantly, and I use that only for purposes of illustrating the point.

Do you have a view on whether there should be a mandatory cleanup schedule in the bill? If you prefer, you may respond to that in writing as well.

Governor KEAN. We have no problem with that at all. As a matter of fact, we set our own deadlines in the State as to where we would like to be on a particular date. The only thing that has held us up at all from meeting any of those deadlines is the lack of Federal funds.

Senator MITCHELL. I thank you very much, Governor, for a very forceful and effective presentation.

Governor KEAN. Thank you, Senator. It is good to see you.

Senator STAFFORD. Thank you, Senator Mitchell.

Senator Humphrey.

Senator HUMPHREY. Thank you, Mr. Chairman.

Governor, my eye was drawn to a statement you made in which you addressed the issue of the appropriate share that a local or State government should bear in the cleanup of a site owned by one of those two entities.

I have had experience which apparently is similar to yours in my State, where a municipally owned site has been delayed in its cleanup because the town is very worried about what costs it will bear if, for instance, this particular site is placed on a Superfund list.

Have you had many examples of this in your State? Is this a common problem?

Governor KEAN. I am going to pass that to George Tyler.

Senator HUMPHREY. Fine.

Mr. TYLER. It is not common, but yes, we have had several sites, including one very significant site where, out of a legitimate public concern for protecting their public funds, a community was forced to retain counsel and more or less take an adversarial posture in the cleanup process. This had the effect of significantly delaying the early stages of studying the problem.

Senator HUMPHREY. Yes; I think you have put your finger on an important problem and one that I would suggest to my colleagues that we might look into to see if we cannot solve it. It is a difficult situation.

The particular site that I refer to is one where drinking water has become polluted, and it has been necessary to provide the residents with a public water supply, but the site still remains unclean because, among other reasons, the town officials are doing their best to keep the EPA out of this situation, for the reason that they just could not afford the costs if they got forced into cleaning it up.

And so I think we are going to have to find a legislative remedy for this situation. The imperative is to get these things cleaned up and to worry about the niceties and the cost recovery later on.

In these kinds of circumstances, that imperative is not being addressed.

Governor KEAN. I would reemphasize, Senator, the point you make because in many of these cases, delay can be costly, both in human and in fiscal terms.

That is the reason we suggested not only the points you bring up but also the fact that if reauthorization is delayed, that we be given the mechanism in Senator Lautenberg's bill to enable a State to go ahead and be reimbursed later on.

We support the Environmental Protection Agency's current policy, which is to clean up first and litigate afterwards. The important thing—and you are right—is to get these sites cleaned up.

Senator HUMPHREY. Yes.

That is all I have. Thank you, Governor.

Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Humphrey.

Senator BURDICK. Mr. Chairman?

Senator STAFFORD. Senator Burdick?

Senator BURDICK. I omitted one question in my notes here.

Governor, what is your attitude on waste-end taxes, either imposed by the States or imposed by the Federal Government? I understand some States have already worked in this area.

Governor KEAN. We recognize that as one of the possibilities for funding. I am not an expert on waste-end taxes. One of the other Senators earlier brought up some problems that might exist if we were to adopt them. I am really not that knowledgeable on the effects, possible negative effects, of a waste-end tax.

We recognize it as one of the alternative funding mechanisms. The most important thing to us is that a mechanism for a stable funding source over a number of years be established. Therefore, we Governors didn't recommend a waste-end tax; we simply mentioned it as one of the possibilities to consider in addition to the other taxes which we have recommended.

Senator BURDICK. Some States have enacted waste-end taxes.

Governor KEAN. I believe they have.

Senator STAFFORD. Thank you, Senator Burdick.

Governor, we are very grateful to you. I may have some additional questions which I would submit to you and to the panel that will follow for response in writing.

I would encourage my colleagues, if they have additional questions, to do so in writing in view of our time constraints.

We cannot tell you how grateful we are that you have come down here. As Senator Lautenberg has said, we will reciprocate by coming to New Jersey in the near future for a hearing up there with you.

Governor KEAN. We will certainly welcome you, sir, and it has been a pleasure to be here.

Senator STAFFORD. Thank you very much, Governor.

Now we would ask the panel to come to the witness table: Mr. Edwin Holmer, who is president of Exxon Chemical Co. and chairman of the Executive Committee of the Chemical Manufacturers Association; Mr. Vance Hughes, attorney, Clean Water Action Project; Dr. Suellen Pirages, director, Institute of Chemical Waste Management; Ms. Jane Bloom, senior project attorney, National Resources Defense Council; and Ms. Janet Hathaway, staff attorney, Public Citizen's Congress Watch.

We did have another panel originally scheduled to be here this morning. Due to a misunderstanding with the staff of that panel, they are not here, but in view of the time we have already consumed, it is maybe fortunate that they are not.

The Chair would propose to go in the order in which we have called your names. We are advised you have been asked to confine your statements to 10 minutes, if you will. Full written statements will be placed in the record.

So, Mr. Holmer, you are the leadoff witness.

STATEMENT OF EDWIN C. HOLMER, PRESIDENT, EXXON CHEMICAL CO., ON BEHALF OF THE CHEMICAL MANUFACTURERS ASSOCIATION

Mr. HOLMER. Well, good morning.

Senator STAFFORD. Good morning.

Mr. HOLMER. Mr. Chairman, my name is Edwin C. Holmer. I am president of the Exxon Chemical Co. and chairman of the Executive Committee of the Chemical Manufacturers Association, and I am pleased to testify before you today on behalf of CMA on the important subject of Superfund reauthorization.

In several appearances before congressional committees since November of 1983, we have testified that Congress should reauthorize Superfund by: One, determining realistically what EPA's annual funding levels will be; two, deriving these funds from a more broadly based mechanism than the tax structure of the current law; three, providing this funding for a 5-year period so the needs can be reexamined; and, four, reenacting the current law unchanged in all other respects.

Today we will provide more specific views on the first two points. In summary, we believe that annual EPA spending levels of approximately $850 million can be justified for the next 5 years and that a feedstock tax at current levels, supplemented by a waste disposal tax to attain equivalent levels, will provide sufficient industry tax contributions to support these annual spending needs.

I have submitted for the record a detailed statement of our views, and I will now briefly summarize them.

In arriving at appropriate funding levels, we believe it is essential to keep two basic points in mind: One, funding should be approached on the basis of EPA's annual spending needs; two, at a great number of sites, part or all of the cleanup costs will come from private parties through a liability scheme of the statute.

To elaborate briefly on the need for an annual spending needs approach, any projects as to the total national spending needs for the future can be based only on the roughest speculation at this time. EPA's current estimates can only project, "between 1,000 and 2,200," as the number of sites that will eventually be placed on the national priorities list.

We do know, however, that each site requires a phased approach of careful study, planning, engineering, and construction. Thus, in any given period, EPA personnel, even with additional resources, can be expected to process a finite number of assessments, investigations, studies, design contracts, and construction contracts.

Only as these projects are progressed will the need arise to obligate and expend funds, and especially when funds are being raised from taxes of a narrow segment of the economy, it would be unjust to force tax payments from that segment substantially earlier than the funds are needed.

We urge Congress to consider seriously the testimony on this point by EPA Administrator Ruckelshaus on March 15 before Congressman Florio's subcommittee. He warned that, "additional infusions," of funding beyond EPA's capabilities, "could have the paradoxical effect of retarding our activities, not speeding them up."

He outlined several limiting factors on EPA's ability to perform at a greatly expanded pace and concluded by warning that such, "additional infusions," of money at too great a rate had the potential for, "building in waste."

Turning to the second basic point, each dollar that would be spent by or collected from responsible parties for Superfund site cleanups is a dollar that does not need to be raised through tax-

ation. Based on EPA's experience with settlements and the number of solvent responsible parties associated with the sites on the national priorities list, these liability contributions will indeed be substantial.

Recent EPA figures show that even in the early stages of the cleanup program that we are in, EPA has already reached "up front" enforcement agreements with private parties for full or partial cleanups for a total value of over $279 million.

EPA has also estimated it will recover 30 percent of its own site cleanup costs from responsible parties.

The only available EPA estimates which project Superfund needs beyond fiscal year 1985 are contained in the EPA document of December 8, 1983, entitled "Superfund Task Force Preliminary Assessment." This study estimates costs for the cleanup of all waste sites that may be placed upon the Superfund National Priorities List or the NPL. It assumes ranges from 1,000 to 2,200 sites and projects total Federal cleanup and program costs in these ranges to run from $6 billion to $16 billion.

This study does not, however, contain the crucial missing number that Congress must explore with EPA: projections of annual expenditure needs. Yet one can peform his own calculation with EPA's numbers to estimate these annual funding needs.

The study assumed that EPA might take 14 years to complete an NPL of 1,800 sites. At this rate, about 128 sites per year would be completed. This projected rate is much faster than the rate EPA is now proceeding under.

For the 1,800-site range, the EPA study projects total Superfund needs to be approximately $12 billion. Even assuming the rate of 128 sites per year could be attained—an assumption which warrants careful scrutiny—one can divide the 14 years into $12 million to arrive at an annual expenditure level. This number is approximately $850 million per year.

Even though the foregoing analysis lacks scientific precision, it is the only—I repeat, the only—exercise we have seen in which there has been any attempt whatsoever to use EPA estimates to arrive at an annual spending needs figure. We urge the Congress to pursue this analysis in more detail with EPA because it is such a key factor in determining appropriate funding levels.

Assuming EPA needs approximately $850 million per year to run an efficient and effective waste site cleanup program, the next question obviously becomes, How do we derive these funds? We would propose to raise $700 million from taxes, continuing the 87½ percent to 12½ percent industry tax/general revenue share contained in the current law. The remaining $150 million will come from cost recoveries and interest on fund investments.

Currently, 87½ percent of the Superfund response funding comes from the petrochemical feedstock tax designed to raise approximately $307 million per year. The current feedstock tax is extremely narrow based, and the more Congress contemplates adding to the current $307 million annual tax level, the more the current funding mechanism would produce an inequitable distribution of the tax burden and an unacceptable economic impact on this narrow segment of industry.

To elaborate on just how narrow based this tax system is, CMA's members pay virtually all of the Superfund feedstock tax collections. And even within the chemical industry, the tax burden is distributed in a highly distorted fashion. Only 12 companies pay almost 70 percent of the Superfund taxes collected.

Yet it has been industrial America—not just a few petrochemical companies—which has disposed of the wastes in the Superfund sites. At the multi-party sites EPA has addressed thus far, we continually see large shares of waste from companies in the electronics, the automobile, the aircraft, the steel, and other basic manufacturing industries.

We recognize, however, that it is important to provide a stable, proven, reliable base of funding for the CERCLA program for the next 5 years. We are thus willing to endorse continuation of the feedstock at current levels for 5 more years. This would raise approximately $307 million per year. We have some suggestions for minor technical corrections to the statutory language which we will forward to the committee for its consideration.

To support EPA's anticipated annual spending levels, more than $307 million from the feedstock tax will obviously be needed. To reach another increment equivalent to the feedstock tax, we support a national tax on hazardous waste disposal at the fixed rate of $50 per dryweight ton. Such a tax would, among other things: produce broader distribution of tax liabilities among industrial categories and a more logical relationship to hazardous waste disposal activities; and provide incentives, where appropriate, to reduce the amount of waste generated and utilize technologies to recycle, reuse, neutralize, treat, incinerate, or otherwise destroy hazardous waste.

We have also prepared legislative language designed to implement this proposal and will forward it to the committee staff.

Our proposal would double the current annual funding level for Superfund. We believe the industry taxes outlined above will fully support EPA's projected spending needs. This is because continuation of the general Federal revenue share, interest on unexpended fund balances, and cost recoveries secured by EPA from responsible parties could easily provide the balance.

For the committee.s convenience, I would refer you to the table on page 9 of my written statement, which summarizes our taxing and funding proposal.

Mr. Chairman, our members have made substantial tax and liability payments in the last 4 years, and we are willing to pay increased taxes in the future, and with the liability payments that will continue into the future, we hope the Congress recognizes that our industry is paying dearly for the Superfund program.

We must emphasize that trying to raise taxes at even higher annual rates from our industry, especially from the narrow-based feedstock tax on primary petrochemicals, will have significant adverse effects on our industry and have spillover effects on the economy as a whole.

The petrochemical sector's 1983 sales were only 85 percent of the 1980 level on which the current feedstock tax was originally based. This petrochemical sector lost approximately $400 million after taxes in 1982 and was below the break-even level in 1983. Primary

petrochemicals and their derivatives have contributed significantly in past years to employment, exports, and about half of the very favorable chemical trade balance that this country enjoys.

However, we are very concerned that the positive chemical trade balance has declined from $15 billion in 1980 to $10.6 billion in 1983. Chemical employment has also dropped by 50,000 people in the last 2 years.

This sector thus continues to suffer from the shrinking sales opportunities of a maturing industry, worldwide overcapacity for primary petrochemicals, increasing feedstock costs relative to direct foreign competition, and domestic competition from the use of alternate untaxed materials. These forces are driving American chemical manufacturers toward permanently closing down primary petrochemical facilities. In our judgment, increases in the feedstock taxes can only worsen our position in these respects.

Finally, Mr. Chairman, I should note that the question of providing compensation for chronic diseases in America is obviously a very serious subject and one that deserves to be carefully deliberated by the Congress. Because of all the health, scientific, legal, economic, and social issues involved, however, we believe it is wrong for Congress to treat this important matter merely as an add-on to a waste site cleanup program.

We believe that anyone who has actually been injured from a waste site should be compensated by those who caused the injury. In fact, we support strong Federal programs to regulate existing sites and to clean up inactive sites to help prevent potential injuries. We believe that all of us would benefit from more scientific information on this issue of possible waste site-disease relationships and, as explained in our written statement, we are taking positive steps to get this information.

We would welcome the opportunity to participate in a public discussion of the subject separately from the Superfund reauthorization debate.

In conclusion, Mr. Chairman, we urge the committee to evaluate carefully the funding and taxing proposals we have submitted today and to be sensitive to the adverse economic impacts of taxing proposals at much higher rates on a narrow segment of the economy.

Finally, I greatly appreciate the opportunity you have provided for me to testify, and I will be happy to answer any questions you may have.

Senator STAFFORD. Thank you very much, Mr. Holmer.

It was the Chair's intention to go through the panel before questions, but our chairman emeritus has another important engagement, and I am going to break here long enough for him to ask one of his questions.

So, Senator Randolph, we would be glad to yield to you.

Senator RANDOLPH. Mr. Chairman, I am very grateful for your understanding of the commitment I have.

Mr. Holmer, when we think of the continuing Superfund cleanup labors, it appears that we will need revenues to the trust fund of at least $2 billion a year for the next 5 years.

Now, much of that, presumably, must come from an expanded feedstock tax; I said presumably. We seem to have learned that

hazardous substances found in Superfund sites are in somewhat different proportions than we expected when we established tax rates for feedstocks in 1980. In fact—if it is fact—in organic chemicals, there seems to be an undertaxing. Let's say that is true, however. As we expand the Superfund and increase the tax on all contributors, it seems to me—and this is only a personal reaction—that we need to broaden the base of the tax, and particularly picking up more inorganic chemicals and metals.

What would be your reaction to the point that I have made? Perhaps others who are testifying might comment later.

Again, Mr. Chairman, I am grateful.

Mr. HOLMER. Senator, I have two reactions. One is that, on your second point, whatever the size of the fund, we think it is very, very important to broaden the base. We have done a lot of deliberations on just how that can be accomplished. The best one that we feel we have come up with is the waste-end approach, because, based upon our analysis of waste sites, many industries are putting materials into the waste sites other than this narrow segment I was talking about, and this is a way of broadening fund collection across not just the upstream part of the chemical industry, or the whole chemical industry, but all industries.

For example, the last waste site I remember reading about in the paper, they were concerned because there were thousands of these home fire alarms dropped in the site, causing radioactive material in the site. That is a perfectly typical example of what is going on.

In the event that fund levels would be considerably higher than I talked about here, and certainly $2 billion a year is a great deal higher than what I and my association were talking about, it would seem to me that the committee should search for other ways to broaden this base beyond the two options that we presented, namely, feedstock and waste end. There are other possible ways to do that.

I would also say further that if there are large peaks in the program that may occur in the next few years, a borrowing authority ought to be investigated to try to take advantage of peaks and valleys in the program to smooth them out.

Now, my other reaction is that I really cannot understand how the staff of this committee has come up with a figure in the level of $2 billion a year on an annual basis for the next 5 years, because we don't understand how that could conceivably be spent in a remotely effective manner by the EPA as they are still building capability in this area.

Senator RANDOLPH. Thank you. I will not argue the $2 billion at this moment.

Mr. HOLMER. I think the concept of broadening is very important, and we would support ingenuity in that area.

Senator RANDOLPH. Mr. Holmer, I want to end the questioning by just this statement: Not only is the corporate structure of the chemical industry very considerable in West Virginia, and the investment is certainly in very large amounts; we are not a State that has come very quickly into a position of, let us say, leadership in chemical production in this country. It has been long established in West Virginia.

Let us say—and I think I am correct on these figures—that, by and large, there are at least 40,000 to 50,000 workers in different categories that are employed in West Virginia in this industry, and therefore, when I ask the question such as I asked, it is to try to establish a reasonable, workable base.

In quoting what the analysis is at the staff level, I am not committing anyone, even members of the staff, but apparently that was the figure that seemed to be, let us say, one that at least I would mention to you here today. But you differ with that figure?

Mr. HOLMER. Yes, I do, Senator.

Senator RANDOLPH. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Randolph.

I think now we will go ahead and hear the rest of the witnesses before we get to questions, if that is agreeable.

Next, Mr. Hughes, we will be very happy to hear from you.

STATEMENT OF VANCE HUGHES, LEGISLATIVE DIRECTOR, CLEAN WATER ACTION PROJECT

Mr. HUGHES. Thank you, Mr. Chairman.

I am here today representing the Clean Water Action Project. This is a particular honor for me in that, for a number of years, I spent countless hours preparing EPA and Justice Department officials to come up here, and invariably, after writing long statements and suggesting that they follow your advice and put it in the record, they would sit here and read the thing for an hour, and I want to apologize for all of them here today.

Senator MITCHELL. Now we are going to see what you are going to do.

Mr. HUGHES. I am clearly putting my statement in the record if that is all right with the chairman.

Senator STAFFORD. Certainly. We will place all statements that have been prepared by the witnesses in the record.

Mr. HUGHES. The circumstances facing this committee once again provide you with a unique opportunity to substantially advance what we used to call good government and respond to the sorely needed relief that thousands of communities across the country who are suffering from these dump sites are crying out for.

It is absolutely essential that you reauthorize Superfund this year. I think it is just basic, good business sense that that be done. If we are going to gear this program up to a stronger and faster pace, EPA, the public, the industry, the local and State governments are certainly going to need some time to do that. If they know what their marching orders are this fall and have a year to put that in place, I think there is a substantial chance that EPA can in fact, and State and local government and industry can in fact spend $2 billion, $3 billion, maybe even $4 billion a year to do something about these hazardous waste dump sites.

A second commonsense point in this regard is, virtually everyone who has looked at the problem realizes the longer those dump sites sit there and leach into the ground water and contaminate more and more soil and risk more and more people's health by exposing them to toxic substances, the greater the cost is going to be down the road. If we can just get geared up and spend a bunch of money

right now and clean up the worst of these sites so we remove people from that risk and so we cut down what the long-term cost of this cleanup is going to be, I think it is going to rebound to the benefit of the industry, No. 1, and certainly to the public and to the various governments involved.

So we strongly urge that nothing get in the way of the Senate and the House of Representatives this year in reauthorizing a much stronger and larger Superfund.

There are a number of recommendations that I will touch lightly upon. My written statement includes quite a long section on the need for a strong Superfund program, some of the examples and proofs that we now have since you enacted this law in 1980. I will not go into that.

It is very clear that the signal of a permanent program needs to be given to everyone involved. I understand the problems with the concept of a permanent reauthorization, but certainly industry, the public, and the various government agencies involved need to understand that this is not just another 5-year shot as the first 5 years has seemed to be. It has actually crippled the perspective of everyone involved to think that Superfund was going to terminate in 5 years. It causes poor allocation of the funds. This next 5-year chunk, or whatever you choose to authorize, should just simply be another down payment on solving the entire problem.

I frankly believe that if industry knows that it is going to have to pay now or pay much more later, it will be more willing to pay a lot up front to complete voluntary cleanups and to cut the long-term cost both of the feedstock taxes and of the actual cost of cleanup. So the concept of a permanent program is very important.

I think it is also essential that you impose a mandatory schedule on EPA. To be sure, that schedule must be a reasonable schedule, and it should be based on what we have already learned from EPA about its capability—indeed, its growing capability—for handling these sites. No one likes to have to face a schedule, but schedules are the way to get EPA moving. We have known that for a number of years. If you don't put a schedule on, all the other programs that do have schedules are going to get the attention. Congress needs to give EPA clear direction in this regard, and we have made suggestions in our testimony.

The size of the fund is obviously very important, and it is closely linked to how clean clean is going to be on these sites. The Office of Technology Assessment, in one of its studies, estimates $20 billion to $40 billion will be needed to clean up this problem. Recently, talking to those people who did that study, they think that the total price tag is much nearer the high end.

EPA itself estimates as many as 2,200 sites will be on the National priority list. They admit in conversations that could go as high as 7,000. Some of the States in their estimates have come up with the figure of 7,000 sites. It is very clear that we are going to have to spend a lot of money on this program.

Probably the only limiting factor is how fast EPA can gear up. In the testimony that Assistant Administrator Thomas gave before this committee very recently, he gave some of the problems with going too fast with this program. If you look back at that testimony, you will find it basically presents concerns about how much

time it takes to do some of the studies, because of weather problems. He raised a concern about how fast the laboratories in the country can gear up to a larger program. He estimates 6 months to get the necessary equipment to go to a larger scale program.

Frankly, I think we are dealing with a gear-up problem that is surmountable. It actually will be a pleasure for many of the companies in this cleanup business to undertake the necessary expansion. It is going to make new jobs and it is going to create new technology that can address the problem.

As to cleanup standards, EPA's staff has made it clear over and over again that they need a better direction on how clean Congress intends these sites to be cleaned.

I was very concerned by a recent article in BNA Environment Reporter, which indicates that EPA, in staff meetings now, is considering whether to make the cleanup standard something that would cut the risk of death to less than 1 in 1,000 additional deaths. Heretofore, virtually all the agencies in the Federal Government had agreed that if you were going to play that kind of risk measurement game, you should be dealing in terms of 1 in 1,000,000, not 1 in 1,000. The error factor in any of those calculations can be several magnitudes. We do not want to cut it so close when we are concerned with risk to human health.

I suspect that the standard that should be established is to return these sites to the condition they were in before they were contaminated. Let's go to background levels.

Now, to be sure, there are going to be situations where that is practically infeasible or where the cost is absolutely prohibitive in that it would steal all the money from all the rest of the sites in the country. Clearly, EPA needs an escape valve there. But certainly in no circumstance should we leave these sites where we have reduced the risk to 1 in 1,000 or 1 in 10,000. We ought to be at least as tight, and I suspect tighter, than the very few standards EPA has been able to get out under the Safe Drinking Water Act, the Toxic Substances Control Act, and the Clean Air Act.

So I strongly urge this committee to pay particular attention to establishing a very, very tight and strong and clear message on how clean these sites should be cleaned.

My colleagues will be addressing Federal facility cleanup, which is a very important problem, and the concerns we all have about assuring better citizens, participation, assuring that there is absolute emergency response from EPA when citizens have been exposed or are being exposed at these sites, and, finally, that citizens who are victims of these hazardous waste dumps can be fairly compensated both with a very tightly framed administrative compensation scheme and a Federal cause of action.

Thank you for your time.

Senator STAFFORD. Thank you very much, Mr. Hughes.

Dr. Pirages, I guess you are next, and if I have mispronounced your name, I apologize.

STATEMENT OF DR. SUELLEN W. PIRAGES, DIRECTOR, INSTITUTE OF CHEMICAL WASTE MANAGEMENT

Dr. PIRAGES. Thank you, Mr. Chairman.

Mr. Chairman and members of the committee, my name is Suellen Pirages. I am the director of the Institute of Chemical Waste Management, which is a component of the National Solid Wastes Management Association.

I am pleased to be here on behalf of the institute. Our membership is composed of commercial firms involved in all aspects of waste management, including the removal and remedial response authorities under CERCLA.

The Institute was originally formed to promote proper management of hazardous waste, and we continue with that aim.

I will just try to briefly summarize the main points in my written testimony. There are only three.

First, on expansion of the fund, we do support an increase in the current funding level. We realize, as everyone else seems to, that the current funding level is insufficient to meet the needs of the sites on the national priority list.

But we would caution this committee to use reliable sources of revenue in increasing that fund. We believe that the waste-end tax does not represent a reliable source of revenue. Admittedly, it has been tried in some States, but as I am sure you will find out if you investigate the situation, wherever it has been tried, it has failed to generate even the estimated predictions of funding needed by those States.

There are a number of reasons for the failures. No one reason has applied in every situation. But it is clear that the waste-end tax does not generate the amount of funds needed.

The waste-end tax also can cause distortion in how hazardous waste is managed and the regulatory control of hazardous waste. We feel that if certain industries consider the economic burden of the waste-end tax to be more than they want to bear, they will seek political solutions having legislative exemptions or regulatory exemptions of their hazardous waste.

We feel this is not good for two reasons. One, it removes hazardous materials from regulatory control. Second, it can lead to practices that would not be acceptable. For example, you can dilute wastes by adding water to them, so that they would meet the discharge limits under the Clean Water Act; this would allow those wastes to be disposed either in a public sewer system or into our surface waters. We feel this is unacceptable.

Second, the treatment processes that are available for waste can often increase the volume of the hazardous waste to be disposed, even though the hazard may be less. Thus, a waste-end tax could discourage use of treatment processes because the tax burden would be greater with the greater volumes.

We feel that waste-end taxes can lead to administrative problems. Even with the EPA's current survey, we do not have any certainty and estimate of the total hazardous waste generated in the country. In addition, there are differences amongst Federal definitions of what is a hazardous waste and State definitions as to what is a hazardous waste. These will create problems and complicate the revenue collections.

Our institute feels very strongly that we have a program that is beginning to work, and we would ask this committee the question,

why saddle a beginning, maturing program with an experimental mechanism?

On the cleanup standards and schedules, we, as everyone else, want expeditious action on cleaning up the hazardous waste sites under the Superfund Program. But I would caution this committee that while deadlines are a way to gain expeditious action, these deadlines must be realistic. If you set unrealistic deadlines, you can create two problems. As proposed in the House, deadlines can be set at particular steps in the remedial action process. You have remedial investigations; you have feasibility studies; and then you have initiation of action. If you put a deadline at any one of these points, you will force EPA to reduce their effort on the actual cleanup and concentrate their effort, for example, on doing remedial investigations.

Second, if the deadlines are unrealistic, EPA will be forced into using what we consider to be short term and less effective remedial technologies. If they are allowed some flexibility, they could perhaps implement the long term, more protective technologies that are available.

Although these technologies are available now, it will take some development time to make them fully applicable to CERCLA situations.

Regarding cleanup standards, our institute fully supports the need for having uniform national criteria in determining how clean is clean. But again, I have two cautions for this committee. First of all, we have very few environmental standards in place right now. Often these are not established in situations that are relevant to the CERCLA sites. You cannot expect that a standard set for one environmental media, such as air, can be applied without change or further consideration to other environmental media such as soil and water.

Second, for many of the chemicals of concern at a CERCLA site, we have no standards at all. There are environmental or health advisories on some of these chemicals, but they are just that—advisories. They have not had formal review, either in the agency or in the scientific community, and they have not gone through a formal rulemaking process.

Our institute feels that applications of health or environmental advisories as a standard are inappropriate. We would suggest that EPA and this committee consider using background levels as the appropriate standard at a particular site and use that as the cleanup level.

Finally, my third point, and perhaps, for our institute, one we consider to be most important, the postclosure liability fund. This fund was included under CERCLA, but it is an essential part of the continuation of our regulatory management program under RCRA.

I would like to point out three things. First of all, it is the only mechanism currently available that provides the insurance that moneys will be available for correcting damage either to citizens or to property after a site is closed. There are no insurance policies available to our industry to cover a site once it has been closed.

I would also like to point out that the postclosure liability fund is a victim compensation fund. It provides payment to victims for injury at those sites.

Contrary to common myths, the postclosure liability funds encourages full compliance with the stringent regulations under our hazardous waste program. The operator and owner at the time of closure must show verification that his site, for the period of its operating life, has complied with the RCRA regulations. He must verify that he has closed that site in compliance with those regulations. If he cannot verify that, he is not eligible to put his site under the auspices of the fund.

I would like to point out that if we do not have a postclosure liability fund—and, unfortunately, there are proposals in the House to kill this mechanism—we will be placing increased burdens either on a Superfund program or future generations.

When I say the term "future," I am talking 20 to 50 years from now, at a minimum. We cannot be sure— and you are trying to decide—how long will Superfund be continued. If Superfund is not available, then it is a future generation that must somehow find a way to cover any potential problems.

Finally, our institute would be amenable to considering changes in the administrative structure of the fund. We would agree that perhaps the ceiling under the current fund is not appropriate. After all, in 1980, none of us knew what it might cost to clean up a site, and we would encourage this committee to consider perhaps raising that ceiling.

That ends my oral presentation. I will be happy to answer and provide more details to questions later.

Thank you.

Senator STAFFORD. Thank you very much, Doctor.

Now we will go to Ms. Jane Bloom from New York.

STATEMENT OF JANE L. BLOOM, SENIOR PROJECT ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL, INC.

Ms. BLOOM. Thank you.

I am Jane Bloom, senior project attorney with the Natural Resources Defense Council, NRDC, a national, nonprofit environmental organization with over 40,000 members.

We appreciate this opportunity to testify before you and to strongly emphasize the need to reauthorize Superfund in this session of Congress. Reauthorization of the act is one of NRDC's top priorities, and we look forward to working with the committee toward strengthening the legislation in the coming months.

We believe that important benchmarks for judging the adequacy of the current Superfund are the degree to which the program is preventing or halting public exposure to releases of toxic chemicals or, where exposure has already occurred, is providing adequate remedies for victims.

In this regard, it is important to stress a point which has been made repeatedly here today, that ground water contamination as a result of hazardous waste sites is a very important factor in exposure of the public, and this affects most of the issues that the committee is now addressing.

Half of the Nation relies on ground water daily as a source of drinking water, and as is now becoming recognized, this important

source of drinking water is increasingly threatened with contamination.

According to EPA, 60 percent of the 881 sites evaluated thus far for inclusion on the national priority list have contaminated ground water and are exposing up to 8.2 million people. At about 350 of these sites, the contaminated ground water is the sole source of drinking water for nearby residents.

The more time that is allowed to pass before site cleanup begins, the more widespread ground water and other contamination problems can become and the more difficult and expensive it is to clean up these sites. Ground water cleanup, for example, can cost millions of dollars per site and can require up to 20 years to complete. Thus, unless we expeditiously halt or remove this contamination through surface and subsurface cleanup, ground water contamination threatens to expose millions more to toxic and life-threatening chemicals.

Judged by these standards, it is apparent to us that the current Superfund program has serious deficiencies. My testimony goes into detail on our views as to these deficiencies, but I will outline them very briefly for you here.

We believe the fund is far too small to ensure cleanup at all hazardous sites. The pace of cleanup is dangerously slow. There is no uniform minimum standard to ensure adequate cleanup. Victims of toxic exposure lack adequate mechanisms to obtain equitable compensation. Dump sites owned or operated by the Federal Government are not being forced to clean up.

These deficiencies make plain that the program has not achieved the cleanup envisioned by Congress and underscore the need to renew and improve the act as soon as possible. We believe that it would be unwise to wait until next year to reauthorize the act, when it is due to expire.

Briefly, our recommendations are as follows: The pace of cleanup should be accelerated dramatically by putting EPA on a schedule for completing work at priority sites and assessing the need for cleanup at all others. The size of the fund must be increased to at least $9 billion over the next 5 years and preferably much more for as long as the job takes. Cleanup standards should be explicitly mandated in the Superfund.

We believe that the feedstock tax should be retained as the primary source of the fund. Since there has been so much interest in this issue, I would like to elaborate just a little more on the feedstock tax.

As Dr. Pirages just mentioned, the feedstock tax is a reliable source of funding for Superfund, but the waste end tax entails a number of problems. The States that have tried it indeed have found severe shortfalls in the amount of revenues that they have been able to actually collect. A few figures illustrate the severity of this problem. In New York, for example, revenues generated by waste-end tax fell over 60 percent short of the State's very modest $10 million goal. New Hampshire alone suffered a 93 percent shortfall since the State enacted a waste-end tax in 1971. According to EPA, cumulative State shortfalls have been 42 percent of estimated revenues in States that are utilizing the waste-end approach.

These are very serious problems with the waste-end tax, and they are partly the result of the fact that we do not have accurate generator data. This is a prerequisite to having an effective waste-end tax as a source of Superfund to ensure that there is not under-reporting and to be able to accurately predict how much money will actually be raised.

Right now we know that EPA does not have accurate data. We found out last fall that four times the amount of waste that was previously believed to be generated was actually being generated on the basis of preliminary data that the agency had received. We found out a couple of weeks ago that the final data showed a 75 percent increase in waste generation since the agency's announcement last fall. Clearly, we do not have reliable generator data yet, and it would be difficult to shift—it would be dangerous, I think—to shift the basis for the fund to a waste-end tax. The primary mechanism which will ensure a reliable flow of resources into the fund really is a feedstock tax.

We would therefore caution the committee that if they are going to adopt a front-end/waste-end combination approach, that they limit the waste-end tax component to a small portion of the fund, say less than 20 percent.

The other issue that I would like to raise here—because I think it is a little less well covered—is the issue of Federal facility noncompliance with CERCLA. This is a very embarrassing problem, because these are the Federal Government's own sites. They are mainly owned by DOD and the Department of Energy, and they are located in every part of the United States.

Not enough is really known about the degree to which these sites are threatening groundwater, polluting the air, or endangering lives, because few if any of these sites have undergone a thorough site investigation, and to date no Federal site has been ranked by EPA using the hazard ranking system or has been included on the NPL.

EPA lists 517 facilities on the ERRIS list, but we believe that there may be many more hazardous sites because each facility may contain a number of sites.

I would like to give one example which I think clearly illustrates the magnitude and range of problems that are posed by Federal facilities.

Air Force Plant No. 4, which is located near the town of White Settlement, near Fort Worth, TX, is, I think, a good example. Disposal practices used for solvents and heavy metals at 10 potential hazardous waste sites on that one property have resulted in contamination of the aquifer that is the major source of drinking water for that town.

The problem went largely unnoticed until September of 1982, when an anonymous tip to town officials brought the problem to light. EPA made repeated requests, once it knew about the problem, for information from DOD concerning this site, five requests in fact, until any action was taken at the site. We believe that this example may be only one of a number of very serious problems at Federal sites.

Although Congress clearly intended in enacting CERCLA that Federal facilities be subject to the same standards as those that are

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privately owned, EPA and the Department of Justice have virtually abdicated their duty to enforce against Federal facilities.

EPA and Justice have a longstanding policy not to take judicial action against another Federal agency over compliance problems. Moreover, in a memorandum of understanding between the Department of Defense and EPA, EPA has released itself from cleanup responsibilities at DOD sites, leaving remediation to DOD, which is the agency that created the hazardous condition in the first place.

Because the agencies have effectively renounced their authority to compel compliance, and there is no effective EPA or public oversight of Federal site remediation activities, there is little if any incentive for these Federal embarrassments to be cleaned up.

We therefore recommend amendments to Superfund that would specify the procedures to be used for Federal site cleanup to correct these problems and ensure that Federal sites are expeditiously cleaned up.

In this regard, we endorse the approach that was proposed recently by Senator Proxmire which would require that EPA and the Federal dump site owner or operator be required to promptly negotiate an agreement establishing a schedule for investigation and cleanup of the site upon notice of a release or possible release. This approach is detailed in our written testimony.

We would also suggest that Superfund explicitly require Federal ERRIS sites to be ranked for inclusion on the national priority list according to a set schedule, on the same basis as those that are privately owned.

I want to clarify, however, that this by no means should indicate that Federal sites be cleaned up with Superfund money. Cleanup should be financed by the Federal agency that created the problem.

That concludes my remarks. I would like to commend the committee on its effort to renew Superfund.

Senator STAFFORD. Thank you very much, Ms. Bloom.

Ms. Hathaway, we would be glad to hear from you.

STATEMENT OF JANET HATHAWAY, STAFF ATTORNEY, PUBLIC CITIZEN'S CONGRESS WATCH

Ms. HATHAWAY. Thank you, Mr. Chairman and members of the committee.

My name is Janet Hathaway. I am an attorney with Public Citizens' Congress Watch. Public Citizen is a consumer research and advocacy organization founded by Ralph Nader in 1971.

Congress Watch commends you, Mr. Chairman, for holding these hearings to explore the modifications of Superfund as this measure is reauthorized. We share your commitment to seeing a strengthened Superfund bill signed into law this year.

Congress Watch has been working with National Audubon Society, National Wildlife Federation, Clean Water Action Project, Sierra Club, Environmental Defense Fund, and Natural Resources Defense Council in developing a position on the reauthorization of this vital legislation, and we endorse the statements that have been made by Clean Water Action Project and Natural Resources Defense Council today.

I will address the coalition's views on two major issues deserving attention, and they are citizen participation and victim compensation.

We strongly support the methods that have been proposed to enhance informed participation in the Superfund cleanup process. Several representatives of industry have stated that they believe that citizen participation will obstruct or slow down cleanup. We are convinced that the contrary is true.

As long as citizens are precluded from participating in the process, they will be rightly resistant to, and suspicious of, plans that will vitally affect their health and safety.

The Superfund law enacted in 1980 virtually excludes citizens, even those directly affected by neighboring waste sites, from meaningful participation in the cleanup process. The single exception is the right of interested persons to have judicial review of promulgated regulations.

Citizens today have no right to be informed about the hazards posed by Superfund sites. They have no right to know of, to comment on, or to influence EPA's decisions about whether, when, and how the cleanup should be done; nor can they require EPA to act in accordance with statutory mandates.

Although EPA policy of late has been to increase community relations efforts, these efforts still fall short of what is needed for citizens to be valuable participants cooperating in the process. And, of course, there are no assurances that these policies will not evaporate under different administrators.

For these reasons, we endorse a number of important steps in the reauthorization of the Superfund to increase the program's accessibility to citizens concerned about waste sites.

First, citizens should have a right to petition to receive a preliminary site assessment, and where a significant threat to human health or the environment is found, the agency should be required, then, to apply the hazard ranking system to determine if the site should be cleaned up using Superfund money.

Second, public notice and opportunity for comment on cleanup plans should be made mandatory.

Third, increased publicly available information is needed about the health effects of exposure to the substances in waste sites. We believe that this should be done through mandating that the agency prepare toxicological profiles of the most common and most dangerous hazardous substances found at these sites.

Fourth, there should be routine assessment of the health risks to the neighboring communities when site investigation and remedial feasibility plans are done.

Fifth, citizen petitions should be permitted to compel emergency response where there are significant risks to health from exposures that are ongoing from waste sites. Where there is a risk, there should be actual health assessments of the affected community, and there should be cessation, or mitigation to safe levels, of the toxic exposures.

Sixth, we believe that there should be citizen suits to permit enforcement of the mandatory duties of the agency and to halt imminent and substantial endangerments.

We believe that it was because of the absence of these safeguards, the first few years of the Superfund program were so scandalously misdirected. We think that these kinds of citizen enforcement provisions have worked very well in other environmental laws and allow citizens to actually prevent "sweetheart deals" and other administrative wrongdoing that endanger the integrity of the program.

Seventh, we think there should be technical assistance to communities in order to evaluate waste site cleanup plans. These grants have actually been used in a couple of instances under the current Superfund, but they have been done simply because the States have been willing to permit the use of money to these communities. We think the law needs to be clarified to indicate that it is, indeed, a permissible use. Where it has occurred—for example, at the Stringfellow acid pits in Riverside, CA—technical assistance really did help to defuse an otherwise highly volatile and distrustful relationship between the citizens, the responsible parties, and the EPA.

As to victims' compensation, there are a number of changes that we believe need to be made to address this very crucial issue.

We believe that for a Superfund reauthorization to pass that addresses the plight of our environment without addressing the injuries to victims of toxic exposure would be regarded as an affront and an abrogation of trust by all those who live near waste sites.

When Congress commissioned a panel of legal experts in 1980 to report back on the status of remedies for victims of toxic exposure, we found that, indeed, they are being left to their own devices. It is the rare victim who can find an attorney who will be willing to bring a toxic tort case, with the huge research costs that are entailed. Many who wish to pursue court remedies are precluded by statutes of limitation or evidentiary barriers that are peculiarly unfair to victims of long latency period diseases that are associated with hazardous substance exposure.

And, of course, we know that State workers compensation only applies to those who are exposed in the course of work, and indeed, it is inadequate, also, when dealing with long latency diseases as opposed to traumatic injuries.

We know that there are uncompensated victims of hazardous substances; a problem does exist. Some industry representatives have urged delay until we document the number of victims. But these numbers, alas, will be changing as we wait. Some of our current victims will be dying, and others will be giving birth to deformed and handicapped children, a second generation of victims.

Furthermore, Congress' action will, in effect, determine the number of victims. Congress has the power to set the standards and criteria which will determine who will receive aid and who will therefore count as deserving.

Second, if Congress establishes procedures to identify victims, we will finally learn how many are being harmed by the chemicals, and industry will be in a better position to judge which compounds are so horribly dangerous that substitutes must be sought. This will not occur as long as the victims are unknown, isolated, and unaided.

Some surprising and, I believe, disingenuous claims are being made about proposals to compensate victims by reimbursing certain medical expenses and lost wages from the Superfund. I have heard statements that such provisions would create a "black lung" program, or that it is a back door to national health insurance. These claims, of course, have no basis in fact.

I have discussed in detail in my written testimony how exceedingly narrow the proposals have been for victim compensation through administrative use of the fund.

If proposals to provide administratively for reimbursement of expenses were intended to create a "son of black lung," as is alleged, they would automatically entitle all persons exposed to toxics to compensation. Obviously, we are recommending nothing of the sort.

Even a showing of both exposure and disease would not suffice. Rather, we suggest that a rebuttable presumption on the issue of causation would be provided only upon proof, first, that the applicant was exposed to hazardous substances from a site or during transportation to a site, and, two, that the applicant died or suffered from an injury, illness, or disability of a kind that can be caused or contributed to by exposure to hazardous substances.

Only upon this showing would there be even a chance of recovery, but recovery, of course, is not automatic. The so-called presumption is not a radical departure from proof of causation required by courts to permit a case to go before the jury.

No one already compensated by insurance, by State or Federal programs, or by the courts should be able to double-dip into the Superfund. We believe that the Superfund should be reserved for those who have not had other measures to cover their expenses and who have not been able to identify responsible parties and prove their liability.

We believe this program is an extremely limited remedy that would aid only some victims. It does not even attempt to make them whole. But without it, victims are left entirely stranded because neither the courts nor administrative systems are currently providing remedies for most toxic victims.

A Federal cause of action is also needed to improve the chances for complete recovery in the courts. It should provide a nationally uniform and fair statute of limitations. A Federal right to sue would also be an opportunity to improve chances of having all evidence relevant to the issue of causation admitted.

A rebuttable presumption that a plaintiff has met the burden of proving causation should be established where a plaintiff can show both exposure and injury of a kind which can be caused or contributed to by such exposure.

Mr. Chairman, let me again commend you for holding these hearings. I look forward to working with you on a strengthened reauthorization of the Superfund program.

Thank you.

Senator STAFFORD. Thank you very much, and thank you all for cooperating with the committee and summarizing your testimony.

The Chairman is going to submit his questions in writing if that is agreeable.

Senator Lautenberg, do you have some questions at this point?

Senator LAUTENBERG. Thank you, Mr. Chairman.

I wanted to just ask a couple of questions here to help me understand the views a little more clearly. Since I did not hear the testimony of the first witness, I might go over something that you have said, but forgive me, please.

If I understand your testimony, you said that only 12 companies pay for 70 percent of the tax and that industrial America is essentially responsible for the majority of the waste disposed in abandoned sites.

What percent of these wastes are the end products of the feedstock chemicals provided by these 12 companies and taxed under Superfund? Do you have that?

Mr. HOLMER. That is a very, very difficult question to answer.

First of all, I would very, very roughly guess—and even these numbers are very, very hard to find—that the chemical industry overall may account for roughly half of the waste disposed of, not generated but disposed of.

The segment of the chemical industry that is currently being taxed, which is the feedstock segment, is probably a relatively lower intensity disposer of hazardous waste than the average of the chemical industry.

The only number that I can specifically pull out is our own company, because I know those numbers, and in the case of our own company, we pay 9 percent of the feedstock tax and dispose of 1 percent of the wastes. So in our case, it is a ratio of 9 to 1. I wouldn't be surprised but what that is typical.

Senator LAUTENBERG. When we discuss the possibility of a waste-end generators tax, I would ask one of the other panelists, whoever would like to volunteer an answer, is there any value besides—Ms. Bloom, you talked about the shortfall on revenue estimates in the States that have a waste-end tax. Is there any value to curtailing this exposure in any event, even if there was no revenue gain? I mean, should there be something? What is the incentive for the generator to cut back on the material they put out in the public domain? Is there nothing in the taxing structure? Dr. Pirages, you said something about that, I think, as well.

Dr. PIRAGES. If I might respond to that, I think that there are other incentives, other than a taxation structure, and that comes in the legislative and regulatory restrictions on how wastes are disposed. Those are being considered under the RCRA Program right now. EPA is considering it. Several States have begun to implement their own restrictions on, say, land disposal of certain wastes.

Because of the threat of these restrictions, we feel that the management practices are already beginning to change. There is considerably more treatment being done now than there was, say, 5 years ago. The kinds of waste and the forms that wastes are put into land disposal are far different. We don't put liquids in land any more.

I think that those kinds of restrictions are far more effective than a taxation because they are harder to get out of the regulatory control.

Senator LAUTENBERG. But is there any value to the combination of these things, the tax at the generators' end as well as regulations that impose severe penalties—in some cases criminal penal-

ties—is there a value to combining these things to cut back on the casual disposal of hazardous wastes?

Dr. PIRAGES. There may be a value in combining them if you are sure that what you are combining all has the same end, and there is now, I think, no real evidence that a waste-end tax changes the management practices of either the generators or the disposers.

Mr. HUGHES. Senator, if I might add a couple of points to that, it would probably be very dangerous to rely very heavily on the waste-end tax to generate moneys to clean up these sites.

Perhaps some form of experiment where you really focused a waste-end tax on some of the more dangerous substances and disposal practices—and you are going to have to really put a large tax per ton to close the gap between the better ways of dealing with these wastes and what a lot of it is going to now, which are these landfills. These landfills, under the Resource Conservation and Recovery Act, as I am sure you know, are leaking. That postclosure liability transfer to the Federal Government has removed the real incentive to get out of the land disposal business and reduce the waste at its source.

So anything we can do to signal that we are going to reduce waste at its source and cut down on how much waste we have to deal with now and in the future is certainly a good idea, but the waste-end tax offers very little hope in that regard unless it is very huge in amount.

Ms. HATHAWAY. I would like to respond really briefly to that as well. Another concern is the administrative burden of a waste-end tax. Obviously, the generators are fairly limited in number. There are some several hundred generators, whereas disposers of some level of these hazardous wastes exceed 100,000.

So we are going to have, really, very severe burdens in trying to actually follow and enforce all of those different disposers of hazardous wastes, and unless there is some very clear benefit to it, it seems very dangerous. We certainly would never want to compromise the integrity of the feedstock tax with any waste-end proposal, but to the extent that one would be proposed, we would want to make sure that it was purely supplementary and not in any way going to be regarded as a replacement for feedstock.

Mr. HOLMER. Senator, as the proverbial skunk at the garden party when it comes to waste-end tax, I would like to make one comment on that issue.

Senator LAUTENBERG. Is that role to be assumed in your other life as well?

Mr. HOLMER. I understand.

Senator LAUTENBERG. If that is an admission here, we could perhaps close up the testimony.

Mr. HOLMER. I would like to make the comment that it is a little hard for me to understand the tremendous bias against the use of the waste-end tax.

I would commend the people in this room to actually go and look at the GAO report on the State experience. You will scratch your head and try to figure out if the words in the report and the words you are hearing here come from the same source.

First of all, the State of California, if I can do my simple arithmetic properly, got about 90 percent of anticipated collections. That

carefully was not mentioned in the earlier testimony. Ninety percent of anticipated collections by the State of California exceeds considerably the experience of the Federal Superfund.

Senator LAUTENBERG. We were talking about in terms of absolute numbers. Might their estimate have been so low that it was unrealistic, that getting 90 percent of de minimis——

Mr. HOLMER. There was always a problem with estimating, and in the case of New York and New Hampshire, if you look at the report, it is very difficult for the GAO, looking back, to find the source of those estimates. They finally concluded that, particularly in New Hampshire, they were probably grossly optimistic.

In the State of California, they collected something like—I am very, very close now—an average of $8 million to $8.5 million out of an estimate of $10 million on one taxing basis—they have two—and the other one, around $5.5 million out of $6 million that they had estimated. It comes out about 90 percent.

That is substantially better than the experience of the Federal Superfund tax, where the collection has been about 80 percent. So the selective reference to State experience should be checked by people actually taking a look at this report and particularly looking at the experience of the State of California.

Senator LAUTENBERG. Ms. Bloom, do you want to respond to that? You are the one who talked about the estimates, the shortfall.

Ms. BLOOM. Right. Well, those estimates were very recently provided by EPA. I think an important thing to reiterate is that the combined estimate, the combined experience of all the States that EPA looked at, was in the nature of, I think, a 42-percent shortfall.

Most States really have experienced problems. New York, for example, right now, having experienced that 70-percent shortfall that I mentioned earlier, is now considering whether it should expand its base to include feedstocks or shift its base, and I think that that has been the experience of many States.

But I think we could provide you with the EPA figures if you would like.

Senator LAUTENBERG. Yes, we would like to see that.

Lest, by the character or the nature of my question, I suggest that I am headed for one proposal or another to generate the funds necessary, I want to make it clear that what I am seeking is information. My mission is one and one only, and that is to make our world, our country, our States better places to bring up people. That is not a bad objective, I don't think. Therefore, my questions are asked and pursued to find the best way to get this job done.

I am one of those who believes that industry and the environmental community and our kids and the people whom we feel it is our responsibility to protect are coming closer together, and I hope that will be the case. I would like the most simple system that we can arrive at.

But it seems to me that if we cannot enforce the revenue collection on tax end for generators, or the waste end, then how can we enforce the other laws? It is a problem that I have to wrestle with.

Mr. HUGHES. Well, Senator, the thing that we often overlook is, we try to deal with the nuts and bolts of the waste-end tax system, and the character of the waste-end tax is basically flawed. The

waste-end tax is something we want to fail as a revenue source, because the whole idea, for most of the proponents of the waste-end tax, is that the extra cost of disposing of the waste at a landfill would cause the waste generators to cease to generate that waste, and get us out of the business of causing us a problem we cannot handle, because none of these land disposal sites can hold the stuff. It is always going to leak eventually.

So you hope that the incentives will be to squeeze it down so you don't generate the waste, and as you do that, you will get less and less money from it and have less and less to spend on the Superfund cleanup.

So, when you follow it logically through, the wasteend tax is simply not a good thing to pin most of your revenue hopes on. It might be a good disincentive to generating waste if it can be properly structured. That is all.

Senator LAUTENBERG. I think I have used my time. I thank you, members of the panel, for your excellent testimony, and I thank the chairman for the chance to ask my questions.

Senator MITCHELL [presiding]. Thank you, Senator Lautenberg.

The principal issue, or at least one of the principal issues, is, of course, the question of what the total national funding need is. Most of the witnesses have addressed that. There has been much discussion about that.

Mr. Holmer, I hope I correctly characterized your position when I asked Governor Kean to comment on it, and I would like to ask each of the other four witnesses to do the same thing in writing; that is, Mr. Holmer has come in and made this argument. He says that you really ought to look at the annual rate of expenditure by EPA in determining what the total national need is, because you can only spend so much, and why tax them to raise more than that? He cites Mr. Ruckelshaus' statement in support of that, and I ask each of your to address the committee in writing subsequently to tell us, first, do you agree with Mr. Holmer; and if you do not agree, why not? Why should not this committee accept the recommendation made by Mr. Holmer regarding the funding level?

Senator MITCHELL. Now, on that point, Mr. Holmer, I have some questions of you, myself.

In your statement, you say that any projections as to the total national funding needs for the future can be based only on the roughest speculation at this time. EPA's current estimates can only project between 1,000 and 2,200 as the number of sites that will be eventually be placed on the national priorities list; thus, the most critical comment to arriving at a total funding needs projection, the number of sites to be addressed, cannot even be narrowed within a 100-percent variability factor.

Do you recall that statement you made?

Mr. HOLMER. Yes.

Senator MITCHELL. There is, first, a minor correction that should be made. I have before me the Superfund task force report to which you refer, and it states that the number of sites are anticipated to be between 1,400 and 2,200. This may have been a subsequent report. So the variability factor is something less than 100 percent, although, obviously, still substantial, approximately 60 percent.

However, later on in your statement, in recommending that the current feedstock tax not be increased, you present a proposal for annual funding of $850 million, which includes $150 million from cost recovery, and you state in that part of your statement, and I quote again, "Recent EPA projections indicate that it expects to receive a 30-percent return factor through such cost recoveries."

Now, I have the EPA report before me, and regarding cost recovery, this is what it has to say. "So far, we have very little experience with recoveries. We estimate that recoveries could generate anywhere from $2 million to $44 million a year." Now, that, if my weak math is correct, is a variability factor of over 2,000 percent.

If the projections of the amount of the total national need are rendered infirm because of a variability factor on the number of sites which is somewhere around 60 percent, why should we not totally disregard your suggestion regarding cost recoveries when there is a variability factor in excess of 2,000 percent?

Mr. HOLMER. Senator, to quibble slightly with the math first, the $150 million that we referred to covered both cost recoveries and interest on the fund; and, depending on what you would put down for interest, the cost recovery would be commensurately less—incidentally, far less than the 30 percent we talked about.

My understanding is that that broad range of numbers that you taxed your math on is somewhat old information and that last week the EPA came out with the 30-percent number. So you might want to check the source of that very recent information.

Senator MITCHELL. All right, we will do that. Thank you very much, Mr. Holmer, and I will ask the staff to get that information and make it available to us.

Another question, Mr. Holmer, on the amount. As you know, you suggested a figure that is substantially lower than the others based upon the annwal rate of expenditure principle, but you have discussed, as we have mentioned, you have suggested that cleanup costs can be recovered from responsible parties, and you have suggested that as a portion of that amount.

Of course, as you realize, the most efficient way of assuring that recovery of these costs occurs would be to explicitly enact a standard of strict joint and several liability, which your association has opposed in the past.

It has been the position of both the Justice Department and the EPA that the Superfund law does in fact impose such a standard. Your position has been just the opposite. If you think that recovery is important and ought to be a significant factor in the amounts involved here, then how can you expect the recovered costs to be large enough to justify the low funding level you have suggested if, on the other hand, you oppose the standard which is the most likely one to achieve significant cost recoveries?

Mr. HOLMER. If I understand the question, despite the chain saw or whatever that is, we, incidentally, feel very strongly that judicious use of the joint-and-several liability, as interpreted by a series of recent court decisions, is a very harmful and valid weapon for the EPA to have, to bring those that hide out in the weeds to the table.

Senator MITCHELL. Does that mean you now support the principle of joint——

Mr. HOLMER. I want to finish my statement, and then I will take your question.

Senator MITCHELL. All right.

Mr. HOLMER. However, indiscriminate, blanket use of joint and several, in our opinion, will continue the confrontational phase of trying to bring parties to the table. The use of joint and several across the board indiscriminately fundamentally brings the deep pockets to the table and tends to leave the lesser pockets, as I say, hiding in the weeds.

One of the very, very big defects of the current approach, which is gradually being altered by EPA, is the fact that there is not a very good way of assessing liabilities to bring multiple parties and multiple-party suits to the table. There is a great set of sticks involved, but there is essentially an absence of carrots to bring these parties to the table.

So our viewpoint is, you try very, very hard by negotiation to bring the PLP's—potentially liable parties—to the table, by whatever persuasive tactics that can be used, and when you cannot get a reasonable number to the table, then you invoke the joint-and-several liability threat to bring the recalcitrants to the table.

But indiscriminate use across the board aimed at the deep pockets will result in their immediately going to their huge cadres of lawyers to fight the case, and you may be aware of the fact that when you get a lot of lawyers involved, you are assuming immediately substantial delays. That is how we feel about it.

Senator MITCHELL. Well, as a lawyer and a former judge and one of that tiny minority of Americans who likes lawyers, I do have to agree with you, Mr. Holmer, on that.

But now, in order for the standard of joint, strict, and several liability to be available, even for selective use, it must exist in the law. That is, the authority must be there, either under the existing law or through a clarifying amendment. Otherwise, obviously, someone affected in an individual case, as people have been, will say there is no legal authority for applying it.

I interpret your remarks to mean that you favor its existence in the law but not its, as you described it, indiscriminate use. Am I correct in that understanding?

Mr. HOLMER. Generally correct. Again, I would hasten to point out that I am not a lawyer, but it is my impression that, based on a series of half a dozen relatively recent court decisions, fundamentally, it is in the law.

Senator MITCHELL. Right.

Mr. HOLMER. Fundamentally, it really is. And, as a result of those decisions, EPA already has all the clout it needs to use this vehicle without any further action legislatively.

Senator MITCHELL. My understanding was—and you correct me if I am wrong—that your association took a position to the contrary; that is, you argued that the authority did not exist in the law. May I now take your present statements to be an acquiescence to the court decisions that in fact it does exist in the law and therefore it is not necessary for us to amend the law to make that clear?

Mr. HOLMER. That is a correct statement.

Senator MITCHELL. All right. Well, thank you very much, Mr. Holmer, on that.

Now, I would like to address one other subject in which I have a very keen interest, as you know, and I noted that you devoted some time to it in your statement, and that is the question of victim compensation, individual compensation.

I want to say at the outset that I disagree strongly with your characterization of it as an unnecessary amendment, and I now refer specifically to your statement on the subject of victim compensation, in which you state, "We do not believe there is evidence of a need for a major new Federal program as an overlay to the tort system which now exists to provide personal injury compensation." Have I accurately read your statement, Mr. Holmer?

Mr. HOLMER. You have.

Senator MITCHELL. Now, to my knowledge, the major study in this area—and I would be interested if you know of any other major studies, if you would let me know—but to my knowledge, the major study in this area was the one conducted under section 301(e) of the Superfund. It was a nongovernment study. It involved the American Bar Association, the American Law Institute, the Association of American Trial Lawyers, the Association of State Attorneys General, and the U.S. Department of Justice.

Different points of view on this subject were held by members of that committee, as you know. There were some representatives there from what might be called industry groups, and they reached a conclusion that I believe may fairly be characterized as directly contrary to the assertion made in your statement.

Now, I would like to ask you, therefore, what is the basis for your statement that you do not believe there is evidence of a need? Are there other studies of which I am unaware?

Mr. HOLMER. I took a little time to look over that particular report that you referred to by those 12 lawyers, and the key point that came through to me was that the entire content of the report was based on their stated presumption that there exists a serious problem.

Their approach, therefore, was, in the event that a serious problem does exist, we would then advocate thus and thus and thus. Now, most of us have been trained to check the presumption first before advocating the solution. Therefore, it is our viewpoint that a great deal of effort should be expended before promulgating drastic revisions to the way we go about tort law to determine the magnitude of the problem as it exists.

Is it restricted to a site? Several sites? Is it dozens of people? Is it hundreds of people? What is the situation? It would seem to us that quantitative analysis of the extent of the problem should precede major changes in the law.

Senator MITCHELL. Well, I will read to you what I believe to be a principal conclusion of the study, and I am quoting now:

> Although causes of action do exist for some plaintiffs under some circumstances, a private litigant faces substantial substantive and procedural barriers in an action to recover damages for personal injury or property damage due to hazardous waste, particularly where the individual claims are relatively small.

It is not stated as a presumption; it is a conclusion which I think was reached by the committee after precisely the kind of analysis you have just suggested. And I have to say to you, Mr. Holmer, that anyone familiar with legal processes—and I want to tell you, I

am very familiar with them—is aware of the truth and conservative nature of that statement. The hard, unfortunate reality is that a person under such circumstances—and we have had them before our committee—faces a lengthy, timeconsuming, enormously expensive cost of litigation, limited only by the virtually unlimited ingenuity of attorneys for the defendants to engage in delaying tactics, and plaintiffs under these circumstances are subjected to extraordinary difficulty.

It is not just in this area—and the lawyers are doing their job for their clients as they see it. It is a very well known fact that if you can take a plaintiff with no substantial resources, drag the proceedings out long enough, take enough depositions, file enough interrogatories, have enough motions, you can compel them, virtually compel them, to accept a settlement that is justified were the parties of equal strength and resources.

I frankly cannot understand your saying, Well, that was a presumption that was not examined. It seems to me that is what they were asked to look at; that is what they studied; and this is what they concluded. And now you are saying, Well, start all over again and do another study to look at exactly what it is they studied.

Mr. HOLMER. I receive your legal lecture in good humor, believe me.

Senator MITCHELL. I think we are in agreement on the basic principles.

Mr. HOLMER. I have lots to learn in this area, as you might detect.

Senator MITCHELL. Well, I think all of us have a lot to learn.

Mr. HOLMER. However, it would seem to me that the argument that there should be some major Federal intervention in the tort process can be applied to many, many areas besides injuries or assumed injuries in hazardous waste sites. You can cover the whole area of automobile accidents and murders and victims of crimes and all kinds of things.

Senator MITCHELL. No, there is quite a difference here. There is quite a difference here, Mr. Holmes, and you——

Mr. HOLMER. I am going to get another lecture on law.

Senator MITCHELL. No, you touched upon it in your statement itself, and that is the problem of dealing with cause and effect in an area in which human knowledge is limited. I mean, in automobile accidents, it is not a difficult task, in a sense of a lack of knowledge of certainty, for a jury of 6 or 12 men and women to decide who went through the stop sign or who was speeding and who caused the accident.

But here you have a tremendous problem that does not exist in any of those other areas you mentioned, and that is, people are subjected to the risk of the reality of injury or death. Common sense tells you what the cause is, but they cannot establish it by the standards which we utilize in our courts of law.

Mr. HOLMER. I think it is definitely more difficult in a the case of exposure than it is in the case of an automobile accident. I could not agree with that more. However, it would seem to me that the subject is big enough that some information should systematically be obtained. There is a tremendous paucity of information. The amazing thing is, people have not tried to get the information.

We even had to join in a lawsuit against a branch of the government to get an agency that was actually authorized in the Superfund bill going in order to obtain information, which is a remarkable step, and as you are aware, that is the Agency for Toxic Substances and Disease Registry.

Senator MITCHELL. Right, and I commend you for that.

Mr. HOLMER. And we have appropriated and are now spending a lot of money on the so-called UAREP study, getting 15 universities and their pathology departments to look at the whole area of hazardous waste sites and to determine what data base there is and the extent to which people may have been injured, a commendable study, as shown by the fact that the World Health Organization has elected to participate in this.

Those are about the only things that we see that are going on that we have exerted some initiative on. It would seem to us that these types of efforts should precede major changes in the law.

Senator MITCHELL. Well, do you think we should delete the section that provides compensation for natural resources? A tree that is damaged now can be the subject of recovery. Do you think we should delete that from the law?

Mr. HOLMER. I think there are tremendous differences between people and trees.

Senator MITCHELL. That is exactly right.

Mr. HOLMER. I have a tremendously greater affinity for the problems of people than I do the problems of trees.

Senator MITCHELL. But how can we justify keeping a provision in the law that permits recovery for damage to trees but not to people? What if a little girl is standing next to a tree and a toxic discharge occurs and they are both damaged? Under the law now, the owner of the tree, if it is a government, can recover for that damage; the child cannot, under Superfund. By what standard of decency, fairness, logic, or common sense do we permit that to continue?

Mr. HOLMER. I think that my answer to that would be that we have a rather comprehensive toxic tort system that people can resort to, that trees really have a hard time bringing people into court, but people really can and are doing it.

Senator MITCHELL. No, the owner of the tree could bring the same lawsuit that a private citizen could. But what happens is, governments don't want to wait. They don't want to go through the court system, so we now provide that if the government owns a natural resource and it is damaged, they don't have to go through the hassle of a lawsuit. They can recover directly from the fund. But a person cannot.

Mr. HOLMER. I have heard the people/tree debate before at one of the Florio subcommittee hearings, so it is not a new one.

I do feel that the fundamental answer to your question still lies in determining the extent of the problem. If the problem is extensive, then appropriate measures should be carried out to protect people, because injured people should be compensated one way or another, and what we should do is concentrate our energies on determining the extent of the problem.

Senator MITCHELL. Well, Mr. Holmer, I want to say something to you. Obviously, what is or is not extensive is a difficult question.

But if you could have sat here like we did and listened to the parents of these 6-, 7-year old children who suffered a very high rate of incidence from leukemia—you heard the testimony this morning of the 7-year-old child rendered bald by the chemotherapy treatments from it—to them, it is as extensive a problem as could possibly exist.

It is kind of a difficult argument to follow. If it is not that extensive, then what is the harm of permitting adequate access to the fund for it? I mean, if there are only a few people, then you are not talking about a lot of money. Then what is the harm in doing it? And if it is extensive, then, obviously, it is justified.

Mr. HOLMER. If it is not extensive, I suspect the current system of handling the issues is entirely adequate, and in fact, there has been a series of very, very successful settlements on the part of people who have litigated under the existing tort system, and we would be happy to make a list of those available to you.

Senator MITCHELL. I wish you would do that.

Mr. HOLMER. We will do it.

Senator MITCHELL. That will be useful.

I must say, you have made a very good statement. Really, you have made some very good points in your statement. They are logical; they are concise. I do not agree with all of them. But it is just a mystery to me why you continue to so vigorously oppose the concept of victim compensation, how you can just continue to take the position that people who go through this are adequately dealt with in the present system, when everybody knows they are not. The lawyers know they are not; the testimony here is that they are not; the study concluded that they are not. It is a mystery to me. I think you are making a real mistake from the standpoint of your own interests.

Mr. HOLMER. I understand your deep feelings here, and I respect you for all those feelings, believe me.

Now, I would like to correct one comment you made, though, about opposing this. Our opposition is short term. Our opposition is that such an important change in the law as reflected by this proposal riding in on the backs of the Superfund reauthorization is what we don't consider appropriate.

What we do consider appropriate is a full-scale debate on this, bringing in all the affected parties—the medical side of the fence, the insurance side, our own side; and we are ready and willing to participate in that debate.

Senator MITCHELL. Well, if you oppose it as an addition to the authorization, but you opposed it when it was part of the bill originally.

Mr. HOLMER. I understand that, because we——

Senator MITCHELL. You were just as vigorously opposed to it when it was part of the bill in the original——

Mr. HOLMER. We don't have much evidence now, and we had even less then.

Ms. HATHAWAY. Senator, I would like to comment if I could.

Senator MITCHELL. Go ahead, please, Ms. Hathaway.

Ms. HATHAWAY. Of course, we do not know the total number of victims of hazardous substances from waste sites, and part of that reason is that victims have no way of being identified. Many know

full well that there is not going to be an adequate remedy in the courts. They know the statutes of limitations in various States are going to preclude them from recovery. They know they are going to have to find an attorney who is willing to take one of these very, very problematic cases on a contingency fee, and so they are never going to even arise.

The fact that we do not have totals on who are victims does not in any way lead us to thinking that there ought not to be a remedy made in the law so that when people in fact are victims and can prove it in a court of law, that they will have an opportunity for recovery from the responsible parties for their injuries.

That is all that we are advocating, and we are advocating that once they can prove it, then they get recovery. It almost sounded like the tenor of the remarks from Mr. Holmer were that we were just going to issue recoveries to anybody who said, I am a victim, who could just show that he lived near a waste site; and that is not the nature of the proposals at all.

Furthermore, there have been investigations, of course, of what waste sites are doing to people. We know, for example, that of the 10 most common substances at waste sites, 7 are carcinogenic. We also know that of the waste sites that have been investigated by the hazard ranking system, 60 percent have ground water contamination.

That leads us to assume that some people near those waste sites who are affected by ground water, who are drinking ground water, are going to be exposed to carcinogens. So we certainly know the problem is of a substantial magnitude.

Senator MITCHELL. It has another dimension, Mr. Holmer, which really ought to be mentioned, that we are all very fortunate to live in this great country and share in its benefits. But if you woke up one morning and found that you lived in an area where there was a potential injury to your family, or if I woke up one morning, or probably most of the people in this room woke up, we could do something about it. We could move. It might be difficult, but we could afford to do it.

Over and over again, we hear from these people. We heard from them a few weeks ago, persons of relatively limited education, limited incomes. The principal asset in their lives is their home. They cannot move. They are trapped. All of sudden, the value of their major asset declines precipitously to become virtually worthless. They cannot do anything about it. And so they face the terrible anxiety and uncertainty and inability to do anything about it, and I think it is a very serious problem, and I hope you and your association will reconsider your position on this because it is very important.

I just have gone on longer than I expected, so I am going to conclude by asking for one further thing from you, Mr. Holmer. You made briefly what I thought was an effective point about the disadvantage that domestic chemical producers and manufacturers suffer from the importation of competing materials manufactured by concerns overseas which do not face the same tax.

That is a matter that does concern me, and I would ask you if you would submit to me, please, or to the committee a more detailed statement on that point—you made a relatively brief state-

ment—supported by as much evidence as you have on that, because I think that is something that we don't want to be doing, that is, to be placing American concerns and employers and employees at a competitive disadvantage, and I would like to know more fully what effect that is having and what it appears to be for the future, because we are talking about extending this now, and the tax itself has been the subject of some discussion today and will be the subject of considerably more discussion at a subsequent hearing we are going to have on that particular subject, and I would like to get a much more detailed statement from you on that.

Mr. HOLMER. I would be very happy to provide that.

I would also make the comment that a more major economic issue would be something like a quadrupling of the feedstock tax on the domestic industry itself, quite irrespective of that. There is no question in my mind that if the feedstock tax were quadrupled, that would see the shutdown of many more facilities and the elimination of many more jobs in our petrochemical complexes, particularly on the gulf coast. But we will be happy to provide that written information.

Senator MITCHELL. All right. I thank you, Mr. Holmer.

I apologize to all of you for keeping you here so long. I may have several more questions which I will submit to each of you in writing, and other members of the committee may also have such questions.

We thank you for your cooperation this morning. It has been enlightening, and I will look forward to receiving your further written responses.

Thank you very much. The hearing is now adjourned.

[Whereupon, at 1:14 p.m., the committee recessed, to reconvene at the call of the Chair.]

[Statements submitted for the record follow:]

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National Governors' Association

James R. Thompson
Governor of Illinois
Chairman

Raymond C. Scheppach
Executive Director

TESTIMONY OF

THE HONORABLE THOMAS H. KEAN
GOVERNOR OF NEW JERSEY
REGARDING THE
REAUTHORIZATION OF THE SUPERFUND PROGRAM

BEFORE THE
UNITED STATES SENATE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

MAY 16, 1984

HALL OF THE STATES · 444 North Capitol Street · Washington, D.C. 20001 · (202) 624-5300

Good morning Senator Stafford, Members of the Committee.

I appreciate the opportunity to testify before this Committee regarding one of the most pressing environmental problems facing this nation today - the cleanup of hazardous waste sites. I am pleased to be representing not only the State of New Jersey but also the National Governors' Association.

As the Governor of almost any state could tell you, few issues so concern and galvanize the public as news that an old forgotten hazardous waste site has been discovered in the neighborhood, or that the landfill down the road is leaking dangerous chemicals. When these problems develop at the local level, the crisis is also quickly felt in the state capitol and in Washington. Recognizing the need for a comprehensive national program dealing with these problems, the Congress enacted the Superfund program in 1980. In New Jersey, the state with the most sites on the national priority list, we are particularly sensitive to these issues. We have been very aggressive in identifying sites and initiating cleanup, but can only do so much without federal help.

If my appearance here today conveys just one message, let it be this: it is imperative that the Congress act quickly to reauthorize the Superfund program this year and get the clean-up process moving.

Overview of the Governors' Position

Let me emphasize that the time to act is now. At the end of the current federal fiscal year on September 30th (FY1984), the fiscal resources for continuing major clean-up efforts at tens, if not hundreds of sites will begin grinding to a halt. In fiscal year 1984, EPA budgeted $150 million for remedial action nationally. By contrast, New Jersey alone will require $108 million for fiscal year 1985. New York State will require a nearly equal amount. Thus, two states alone need more next year than the entire national budget set aside by EPA for this year. If Superfund is not authorized by that time, some other mechanism must be put in place to allow state programs to continue. New Jersey Senators Lautenberg and Bradley have proposed one such mechanism which would provide states with credit for work done on Superfund sites with state funds. That credit could later be reclaimed for work on other sites when a reauthorization bill is in place.

Hence, I come before you today with a two-fold mission: first, to convince you of a need to rapidly reauthorize the Superfund; and second, to implore your support for an alternative funding mechanism. Now let me address these issues more specifically.

1) Size of the Fund

I believe and the NGA policy resolution endorses this position, that the size of the fund available to address the problem of hazardous waste sites ought to be increased to at least $1.8 billion per year for five years, for a total of $9 billion. We believe that this level of resources is the minimum needed to address both sites currently on the national priorities list as well as sites likely to be added to the list in the next few years.

In developing the $9 billion figure, the Governors considered that a minimum of 1,500 hazardous waste sites will eventually need to be cleaned up under the fund, and relied on estimates that average clean-up costs are approximately $6 million per site. I would note that a December report by EPA's Superfund Task Force - made available to us after we had developed our $9 billion recommendation - estimated that between $8.4 billion and $16 billion will be required to do the job.

I personally believe that the EPA figures may be conservative. A number of unknown variables, such as groundwater contamination more extensive than we anticipate, could significantly increase the cost of cleanup. At any rate, the public interest requires that adequate resources be available to do the clean-up job.

A number of Congressional proposals would expand the current tax on petroleum and chemical feedstocks, and introduce a new tax on waste disposal. The Governors strongly support expansion of the feedstock and petroleum taxes, since they provide a reliable revenue base for the fund. We also encourage the Congress to consider developing other dedicated revenue sources, which could include a waste-end tax.

2) The State Role

There are a number of critically important management issues associated with the Superfund program. Perhaps most serious is the need to allow New Jersey and other states to proceed with cleanup of sites included on the National Priority List, using state funds when federal funds are not available. This is especially important now, as we approach fiscal year 1985 without a reauthorization bill or an increased level of funding in place. The nature of the hazardous waste problem is far too critical to delay action when a State has the resources to remove such threats on its own. Under this approach, a state that proceeded would receive a credit for eligible costs that could be applied to other listed sites in the state. The grant of a credit would, of course, be subject to the authorization and appropriation of additional federal funds. In this way, states would no longer be forced to postpone clean-up efforts because of uncertainties surrounding the timing or amount of federal funding. An amendment to this effect is essential if states are to proceed expeditiously with their cleanup programs.

In fiscal year 1985, New Jersey's management plan calls for activity on 69 separate major sites. This will involve 144 separate design, engineering or construction projects at a cost of $108 million in federal dollars. In fiscal year 1986, we will require $123 million to keep this program moving. It is absolutely essential that a credit mechanism be put in place before our program is brought to a standstill.

While the current EPA management has been vigorously proceeding to implement Superfund, and has been more than supportive of New Jersey's efforts, I believe they face a significant problem. This year, when New Jersey needed an extra $20 million to continue its program, Bill Ruckelshaus and Lee Thomas responded. Next year, they will not be able to. They simply do not have the fiscal resources available. Their own projections of the number of studies, design and construction projects that will be initiated next year, when compared to the fiscal realities of Superfund, amply demonstrate this point.

New Jersey is willing to put up its own money to keep our cleanup program moving ahead. All we ask is that a fair credit formula be put in place so that we are not unjustly penalized for our progress in cleaning up hazardous waste. I am first and foremost here to support a speedy reauthorization bill with a large increase in authorized funding levels. But the health and environment of my State are too important for me to not emphasize the need for an insurance policy -- namely the Lautenberg-Bradley proposal.

A second important state management issue is the need to change the state match required for cleanup at sites which are owned by a state or local government. The Governors believe that the appropriate match for cleanup at these sites is 10 percent, the same as for other sites, and that the 10 percent share should be considered a final settlement of all state or local liability under Superfund. A local government is inevitably forced into an adversarial posture in cases where present local officials and certainly current local taxpayers bear no culpability whatsoever to the hazardous waste site. The result is that the cleanup is delayed.

Third, support is needed for state programs. Although Superfund is not designed to be delegated in the same manner as the air, water, or Resource Conservation and Recovery Act programs, the states nonetheless play important roles in implementing the Superfund program. Specifically, the states incur costs identifying and assessing sites, developing and administering their programs, and enforcing the law. Grant funds, similar to those awarded under the Resource Conservation and Recovery Act program, ought to be available to assist states in meeting these expenses. I believe crediting the states' administrative expenses towards the 10 percent match would be an effective way to support state programs.

Another clean-up issue which affects the states relates to the current inability to permanently relocate individuals when necessary to protect public health and safety during removal actions. Experience with the dioxin problems in Missouri suggested that the acquisition of property and the permanent relocation of threatened individuals may be necessary during an emergency removal. The current law allows temporary resettlement during such emergencies, but a host of problems make such a temporary approach unworkable. For example, it may be impossible to arrange for insurance of "temporarily abandoned" homes and possessions. The ability to permanently relocate people can be an important tool in the emergency removal program.

Finally, we believe that the Superfund program can be made more efficient if it is made less centralized, with states and regional offices given larger decision-making authorities than they have currently. In particular, states should have the option to take the lead role in planning and implementing Superfund response actions, with a right of first refusal to assume the lead at particular sites. Such responsibility should include establishing priorities, undertaking remedial investigations and feasibility studies, selecting contractors, etc. In addition, administrative efficiencies can be realized if states were allowed to develop a generic statewide response program for sites on the National Priorities List. New Jersey has done this with general concurrence from EPA. This process should be formalized and integrated with the Superfund budget so that funding is certain as a project moves from study to design to construction. This would eliminate many delays in the clean-up program.

3) State Response Funds

It is imperative that the states have adequate resources to carry out their responsibilities under Superfund and to meet clean-up needs in the absence of EPA action. Many states have had difficulty raising their shares of Superfund clean-up costs. In addition, states need resources to deal with sites which are not listed on the National Priorities List (NPL). To develop these resources states may wish to dedicate taxes on petroleum, chemical feedstock, waste disposal, or other sources. In New Jersey, for example, we have a state spill fund that is raised through a tax on hazardous substance and petroleum products. With this fund, we have been able to address many hundreds of sites throughout the state. We feel very strongly that federal preemption of such state taxes is totally inappropriate. Language in Section 114(c) of Superfund has fostered a great deal of litigation on this issue of preemption. We do not believe it was Congress' intent to preempt state taxation and we therefore request that that section of the law be completely repealed.

4) Operation and Maintenance Costs

Under EPA's interpretation of the current law, the long term operation and maintenance cost of remedial measures must be borne by the state after initial cleanup. This causes a number of serious problems. First, many states simply do not have the resources necessary for the perpetual care of these hazardous waste sites. But, perhaps more important, failure to explicitly consider long-term operation and maintenance costs biases cost-effectiveness calculations and distorts EPA's selection of a clean-up plan. For example, the most cost-effective remedy for a site with extensive groundwater contamination may appear to be a quick fix of surface contamination, with the state left responsible for a very costly operation and maintenance program designed to clean up the subsurface. That kind of solution is not, in fact, cost-effective in the long run. We strongly recommend that the trust fund should be used to support operation and maintenance costs over their expected life. These expenditures should be subject to the same 90/10 state match requirement as initial clean-up measures.

5) Clean-Up Standards

As you are aware, EPA currently makes the decision on "how clean is clean enough" on a site specific basis, considering cost-effectiveness and other factors. We believe that responsible parties, the states, and EPA itself, have been hampered in site clean-up decisions by the lack of clear definition of how clean is clean. Quite simply, neither the government nor the public nor the responsible party knows what to expect under this system. We believe the EPA should be directed to work with the states to develop criteria or guidelines on those measures which are acceptable to protect public health and the environment. These criteria should reflect such considerations as the nature of the toxic or hazardous materials involved, the environmental pathways which could lead to human exposure, the population at risk, and the cost-effectiveness of optional clean-up strategies. The use of clean-up criteria rather than absolute clean-up levels should be encouraged to allow for maximum judgment in a given situation and avoid arbitrary solutions.

6) Post Closure Liability

The Governors are very concerned that in future years significant problems will develop with hazardous waste sites which close under RCRA. Some provision needs to be made to ensure monitoring, maintenance, and remedial action, if necessary, at those sites. The post closure liability fund, established to provide those safeguards, is not adequately funded. The Governors' recommendation is that it be at least doubled in size and that the liability period for responsible parties be extended from 5 to 30 years. In addition, EPA should be directed to review insurance requirements for owners and operators of hazardous waste facilities to ensure that, for at least a 30 year period following closure, sufficient resources are available to perform monitoring and take any necessary corrective actions.

I am aware of proposals to incorporate the post closure fund into the Superfund itself, and of concerns that the post closure fund essentially lets responsible parties "off the hook." I can assure you the Governors recognize the need to collect against responsible parties where they exist. But we also believe some funding mechanism must be available for use when there are no responsible parties or when their resources are not adequate for the job. The Superfund is aimed at a different universe of sites than the post closure fund and is designed to ensure the cleanup of sites which rank among the most dangerous in the country. Many of the post closure sites with which we are concerned will not get on to the National Priority List but nonetheless represent serious public health concerns. Some mechanism has to be available to clean them up.

7) Natural Resources Damage Claims

The three-year period provided by Superfund for states to file claims for damages to natural resources expired before the Environmental Protection Agency and the Department of Interior had published the guidelines necessary to file such claims. We believe it is important to provide compensation for damages to natural resources. The Department of Interior should be directed to publish the necessary guidelines expeditiously, and the opportunity for the states to file such claims should be extended to at least five years after those guidelines are published.

8) Federally-Owned Sites

As I am sure you are aware, there are a number of federally owned hazardous waste sites which may constitute a serious threat to public health and safety. Cleanup of these sites should be expedited, and EPA should be given responsibility for assuring that remedial actions at federal sites are consistent with the National Contingency Plan. Since the federal government is a "responsible party", we believe the cost of cleaning up these sites should not be borne by the trust fund.

9) Cost Recovery

The Governors were very concerned when, in the early years of the Superfund program, the EPA sometimes pursued endless negotiations with responsible parties over certain site cleanups. We support the current EPA philosophy of cleaning up first and recovering costs later. To avoid any further confusion about this matter, the statute ought to make it clear that the EPA's obligation is to protect public health as a first priority, and negotiate with responsible parties second. If such negotiations have not succeeded after a reasonable but short period of time, litigation for recovery of costs coupled with a Superfund financed cleanup is appropriate.

In addition, the current practice whereby the states and the federal government litigate separately to recover their respective shares of clean-up costs is duplicative and wasteful. Rather, the states and the EPA should be directed to agree that one or the other will take the lead in litigation for full recovery of both the state and federal shares, and then return the appropriate share to the state or federal partner. Any amendments in this regard should of course make clear that states already have a cause of action to recover costs at sites where they have contributed matching funds.

Conclusion

Mr. Chairman, as you are aware, one of the important items of business at the National Governors' Association's recent mid-winter meeting was the adoption of a policy position on the reauthorization of Superfund. The policy statement - a copy of which is attached to my testimony - was unanimously approved by the Governors. In developing this position, we solicited the views of business and environmental groups, and worked closely with individual state environmental and health officials as well as members of the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). I have described this process to emphasize that the Governors' position represents a strong consensus among the elected officials who have the primary responsibility for environmental and public health protection.

The Governors' position on Superfund, which I have outlined for you today, is a call to act now to reauthorize the law, to expand the trust fund significantly so that resources are commensurate with the problems we face, and to correct a number of deficiencies in the present law so that the clean-up process is faster and more efficient. The Governors' major concern is that public health and the environment be protected. We are convinced that such protection requires a major commitment of resources from business, the federal government, and the states.

The Governors strongly support increasing the Superfund to at least $1.8 billion per year over a five-year period. We are delighted that several bills have been introduced which recognize the need to change the current law in ways basically compatible with our recommendations, and look forward to working with you in months ahead to pass this important legislation.

Mr. Chairman, members of the Committee, I want to thank you for providing the opportunity to appear before you today on this important issue.

CHEMICAL MANUFACTURERS ASSOCIATION

STATEMENT

OF

EDWIN C. HOLMER

PRESIDENT OF

EXXON CHEMICAL COMPANY

ON BEHALF OF THE

CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ON

SUPERFUND REAUTHORIZATION

May 16, 1984

2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1100 • Telex 89617 (CMA WSH)

The Chemical Manufacturers Association is a nonprofit trade association whose member companies represent more than 90 percent of the productive capacity for basic industrial chemicals in this country. In several appearances before Congressional committees since November of 1983, we have stressed both our strong support for an effective national program to clean up problem waste sites, and our commitment to play a cooperative and constructive role in the process leading to Superfund reauthorization. We are pleased to return to Congress today to re-emphasize some of our most fundamental concerns and to announce our support for specific funding levels -- and the tax mechanisms to derive them -- for the next five years.

In our previous statements, we have testified that Congress should reauthorize Superfund by (1) determining realistically what EPA's annual funding needs will be, and providing for such levels; (2) deriving these funds from a more broadly based mechanism than the tax structure of the current law; (3) providing this funding for a five-year period so the needs can be reexamined; and (4) re-enacting the current law unchanged in all other respects.

We are prepared today to provide you with more specific views on the first two points. In summary, we believe that annual EPA spending levels of approximately $850 million can be justified for the next five years, and that a "feedstock" tax at current levels -- supplemented by a "waste disposal" tax to attain equivalent levels -- will provide sufficient industry tax contributions to support these spending needs.

I. Approach to Determining Appropriate Funding Levels

Determining the appropriate "size of the fund" has perhaps been the key issue in the Superfund reauthorization process thus far. The most simplistic approach would be to estimate the total number of waste sites that will need cleanup under the federal program, multiply that number by an average cleanup cost per site, and then raise Superfund taxes to obtain the product of that multiplication as quickly as possible. This approach, however, would be totally irrational and counterproductive, and would result in taxation far in excess of needs.

We will outline below the key factors which Congress should consider in deciding appropriate funding levels, and will describe a process for determining such levels. Our essential points are: (1) funding should be approached on the basis of EPA's annual spending needs; and (2) at a great number of sites, part or all of the cleanup costs will come from private parties through the liability scheme of the statute.

A. Need to Determine EPA's Annual Spending Needs

Any projections as to the total national funding needs for the future can be based only on the roughest speculation at this time. EPA's current estimates can only project "between 1000 and 2200" as the number of sites that will eventually be placed on the National Priorities List. Thus, the most critical component to arriving at a total funding needs projection -- the number of sites to be addressed -- cannot even be narrowed within a 100% variability factor.

Funding should accordingly be approached on the best estimates of EPA's annual spending needs for the next five years. Under this five-year approach -- which is the time-frame Congress originally chose in enacting Superfund -- Congress may re-examine the funding needs question in the future with more complete information.

An annual funding approach based upon annual spending needs is eminently rational. Each site requires a phased approach of careful study, planning, engineering, and construction. Thus, in any given annual period, EPA personnel -- even with additional resources -- can be expected to process a finite number of assessments, investigations, studies, design contracts, and construction contracts. And only as these projects are processed will the need arise to obligate and expend funds.

Moreover, such an approach is eminently fair. Especially when funds are being raised from taxes on a narrow segment of the economy, it would be unjust to force tax payments from that segment substantially earlier than the funds are needed. We note that in cleaning up the federal government's own sites, Congress provides funding from the responsible agency's appropriations on an "as needed" basis. We believe fairness dictates that Congress view industrial funding on a similar basis.

We urge Congress to consider seriously the testimony on this point by EPA Administrator Ruckelshaus on March 15 before Congressman Florio's subcommittee. Administrator Ruckelshaus warned that "additional infusions" of funding beyond EPA's capabilities "could have the paradoxical effect of retarding our

activities, not speeding them up." He outlined several limiting factors on EPA's ability to perform at a greatly expanded pace, including physical and administrative limitations within federal and state governments in performing remedial investigations and feasibility studies; the need for site assessments to be performed in varying seasons of the year; limitations within the analytical laboratory industry; and the need for informed citizen participation. He concluded by warning that such "additional infusions" of money at too great a rate had the potential for "building in waste."

B. Recognition that Liability Payments will Offset Tax Needs

A second important principle to recognize is that a significant portion of the cleanup costs for Superfund sites will be paid for by responsible parties through the statute's liability scheme. These costs may be paid for "up front" -- by responsible parties either performing or paying for cleanup work directly -- in which case the moneys never go through the Superfund at all. Or these costs may be paid for in "cost recovery" -- by responsible parties reimbursing the fund for cleanup costs incurred. In either event, annual funding levels must be derived by accounting for these important factors. Each dollar that will be spent by or collected from responsible parties for Superfund site cleanups is a dollar that does not need to be raised through taxation.

Based on EPA's experience with "up front" settlements thus far and the numbers of solvent responsible parties associated with the sites on the National Priorities List, these liability

contributions will indeed be substantial. Recent EPA figures show that even in the relatively early stages of the cleanup program that we are in, EPA has already reached "up front" enforcement agreements with private parties for full or partial cleanups for a total value of over $279 million dollars.

C. Use of EPA Estimates to Arrive at Annual Spending Needs

The only available EPA estimates which can be used to project Superfund needs are contained in the EPA document of December 8, 1983, entitled "Superfund Task Force Preliminary Assessment." This study estimates costs for the cleanup of all waste sites that may be placed upon the Superfund National Priorities List (NPL). It assumes ranges from 1000 to 2200 sites, and projects total federal cleanup and program costs in these ranges to run from $6 to $16 billion. This study recognizes the role of "up front" liability payments in the Superfund program by assuming that 40% of the NPL sites will be cleaned up by responsible parties. These costs are accordingly not included in the $6 to $16 billion projections.

This study does not, however, contain the crucial missing number that Congress must explore with EPA: projections of annual expenditure needs. Yet one can perform his own calculation with EPA's numbers to estimate those annual funding needs. On page 13, the study assumed that EPA might take 14 years to complete an NPL of 1800 sites. At this rate, about 128 sites per year would be completed. This projected rate is much faster than the rate EPA is now proceeding under.

For the 1800-site range, the EPA study projects total Superfund needs to be approximately $12 billion. Even assuming the rate of 128 sites per year could be attained -- an assumption which warrants careful scrutiny -- one can divide the 14 years into 12 billion dollars to arrive at an annual expenditure level. This number is approximately $850 million per year.

Even though the foregoing analysis lacks scientific precision, it is the only exercise we have seen in which there has been an attempt to use EPA estimates to arrive at an annual spending needs figure. We urge Congress to pursue this analysis in more detail with EPA because it is such a key factor in determining appropriate funding levels.

II. Mechanisms to Raise Funding

Assuming EPA needs approximately $850 million per year to run an efficient waste site cleanup program, the next question obviously becomes: how do we derive these funds? We offer below our proposal to raise $700 million from taxes, continuing the 87½% - 12½% industry tax/general revenue share contained in the current law. The remaining $150 million will come from cost recoveries and interest on fund investments.

A. "Feedstock" Taxes

Currently, 87½% of the Superfund response funding comes from three special industry taxes designed to raise approximately $307 million per year. These taxes, imposed on the sale of certain petroleum products, organic chemicals, and inorganic chemicals, are commonly referred to as a "feedstock" tax. The "feedstock" approach as now designed and operated is extremely narrow-based.

And the more Congress contemplates adding to the current $307 million annual tax level, the more the current funding mechanism would produce an inequitable distribution of the tax burden and an unacceptable economic impact on this narrow segment of industry. In addition, the ability of such a narrow-based mechanism to produce revenues would become strained.

To elaborate on just how narrow-based this tax system is, CMA's members pay virtually all of the Superfund "feedstock" tax collections. And even within the chemical industry the tax burden is distributed in a distorted fashion. Only 12 companies pay almost 70 percent of the Superfund taxes collected.

Yet even a cursory look at the types of industries which own or have contributed waste sites being cleaned up under Superfund shows that it has been Industrial America -- not just a few petrochemical companies -- which has disposed of the wastes. At most sites, the share of the prime Superfund taxpayers' waste is quite small. At the multi-party sites EPA has addressed thus far, we continually see large shares of waste from companies in the electronics, auto, aircraft, steel, and other basic manufacturing industries.

We recognize, however, that it is important to provide a stable, proven, reliable base of funding for the CERCLA program for the next five years. We are thus willing to endorse continuation of the feedstock tax, at <u>current levels</u>, for five more years. This would raise approximately $307 million per year. We have some suggestions for technical corrections to the statutory language which we will forward to the Committee for its

consideration. Our corrections, for instance, would make clear that hydrocarbons used for fuel would not be subject to the tax.

B. "Waste End" Tax

To support EPA's anticipated annual spending levels, more than $307 million from the feedstock tax will be needed. To reach another increment equivalent to the feedstock tax, we support a national tax on hazardous waste disposal at the fixed rate of $50 per dry weight ton. Such a tax would, among other things:

- produce revenues of the magnitude the current feedstock tax is designed to produce;
- produce broader distribution of tax liabilities among industrial categories and a more logical relationship to hazardous waste disposal activities; and
- provide incentives where appropriate to:
  1) reduce the amount of waste generated, and
  2) utilize technologies to recycle, reuse, neutralize, treat, incinerate or otherwise destroy hazardous waste.

I am submitting for the record our testimony of January 25, 1984 before the House Transportation and Tourism Subcommittee in which we outlined in some detail the basis for our waste disposal tax proposal. We also have prepared legislative language designed to implement our proposal, and will forward it to the Committee staff.

C. Balance from General Revenues, Interest, and Cost Recoveries

We believe that the two types of industry taxes outlined above at the levels we indicated -- approximately $307 million per year from "feedstock" and $307 million per year from the "waste disposal tax" -- will fully support EPA's projected

spending needs. This is because continuation of the general federal revenue share, interest on unexpended fund balances, and "cost recoveries" secured by EPA from responsible parties after it has spent fund monies for cleanups should easily provide the balance. In fact, recent EPA projections indicate that it expects to receive a 30% return factor through such cost recoveries. Even if only $700 million per year is spent from the fund for clean-ups, there would be over $200 million in cost recoveries per year at the 30% rate. Thus, our estimates are quite possibly conservative as to this factor.

The following table summarizes our proposed funding scheme to match annual EPA spending needs of approximately $850 million:

(All figures are stated in millions per year)

$307	feedstock taxes
+ 307	waste disposal tax
+ 86	general federal revenues
$700	total tax funding (like current CERCLA, 87½% industry tax and 12½% general revenue)
+ $150	cost recoveries and interest
$850	annual EPA spending

III. Economic Impact on Industry

As we have shown, the chemical industry has been committing massive financial resources to the nation's waste site cleanup program. With our tax and liability payments of the last four years, with the increased taxes we are willing to pay in the future, and with the liability payments that are certain to continue into the future, we hope the Congress recognizes that our industry is paying dearly for the Superfund program. We must

emphasize to Congress that trying to raise taxes at even higher annual rates from our industry -- especially from the narrow-based "feedstock" tax on primary petrochemicals -- will have significant adverse effects on our industry and have spillover effects on the economy as a whole.

The petrochemical sector's 1983 sales were only 85% of the 1980 level on which the current feedstock tax was originally based. This sector lost approximately $400 million in 1982 and was below the breakeven level in 1983. Primary petrochemicals and their derivatives have contributed significantly in past years to employment, exports, and about half of the very favorable chemical trade balance. However, we are very concerned that the positive chemical trade balance has declined from $15 billion in 1980 to $10.6 billion in 1983. Chemical employment has also dropped by 50,000 in the past two years.

This sector thus continues to suffer from the shrinking sales opportunities of a maturing industry, worldwide over-capacity for primary petrochemicals, increasing feedstock costs relative to direct foreign competition, and domestic competition from use of alternate untaxed materials. These forces are driving American chemical manufacturers toward permanently closing down primary petrochemical facilities.

The impact for Superfund, if the feedstock tax is raised beyond current levels, can only be a shrinking feedstock tax base. And the erosion of this industrial sector will have unfavorable consequences for the American economy. First, increased foreign competition is already threatening American sales in both foreign and domestic markets. Imported downstream derivative chemical products which are made from non-taxed

foreign raw materials do not have the feedstock tax built into their pricing structure. Imports of these products have increased in the past few years while American facilities which manufacture taxable raw material chemicals are being shut down and permanently written off. Second, the increasingly higher feedstock taxes can eliminate the opportunities for the American primary petrochemical industry to become once again profitable. This would result in severely reduced reinvestment in new efficient facilities and continued decline in international competitiveness. This also accelerates undermining this industry's historically large positive balance of payments contribution to the economy, and portends substantial job losses.

IV. Need to Reauthorize Superfund Without Unnecessary Amendments

Aside from the need for new funding and adjustments to the funding structure, we believe that the law as now written provides a good, workable framework for the national waste-site cleanup program. We are fully aware of widespread frustrations that the program has not moved faster. Our industry, in fact, stands to benefit quite directly from getting this problem behind us, and we are as anxious as anyone to see that day come.

It is true that relatively few sites have been "completely" cleaned up so far. It is totally wrong, however, to jump from that fact to a conclusion that the law needs to be changed. Any massive new program takes time to gear up and get in place. And the very nature of the national waste-site cleanup problem requires that a great deal of work precede the completion of cleanup at many sites. Sites must first be identified and ranked

so the most significant ones can be addressed in a priority fashion. Then, when a particular site is selected for cleanup, there must be a careful analysis to determine the appropriate remedy to protect public health. There must then be a design and construction phase which often necessarily takes several years. Thus, since the program is barely three years old, one can not rationally expect many sites to be "completely" cleaned up yet.

Despite the initial start-up difficulties with the program -- which had nothing to do with the way the law was written -- we believe that any fair analysis indicates that EPA is now making good progress and has made recent policy decisions which will even further speed up the process. EPA has stopped requiring the states to pay 10% of the pre-construction planning costs; it has delegated more decisional and spending authority to its regional offices; and it has moved toward a policy of cleaning up first, and addressing legal liabilities later in cases where it is unable to settle with private parties.

And recent statistics show that the program is now escalating at a good rate. For instance, according to charts contained in the December 8 EPA study, the number of remedial investigation/feasibility studies initiated -- and this number is a direct indicator of the number of remedial actions which will follow -- has jumped from 21 to 30 to 87 in fiscal '81, '82, and '83 respectively. Moreover, the other key component of the cleanup program -- enforcement settlements which rely on direct industry dollars unfunnelled through taxes and the fund -- has been growing at a great rate. This program resulted in settlements worth $31 million, $49 million, and $91 million in fiscal '81,

'82, and '83 respectively. And the program has already produced settlements worth $109 million in fiscal '84.

It is especially interesting to note that the December EPA study indicates that EPA carefully considered whether the current law should be amended. The study concluded on page 18 that because of the "sweeping authority granted the Agency" by the current law and other factors, a "simple extension of existing authorities" should be recommended, with perhaps adjustments only to the funding level and structure. The only exception was the study's recommendation to revise one section which deals with post-closure liability for RCRA facilities. This section has nothing to do with the waste site cleanup program, however.

Because the program is now beginning to produce and EPA is "on track" under the currently drafted law, we think it would be inappropriate to encumber the process with many new significant amendments which can only disrupt the process and distract EPA from the track it is on. Moreover, such controversial amendments can only delay the reauthorization of needed funds for EPA. We are submitting for the record our testimony of March 8, 1984, before the House Transportation and Tourism Subcommittee. In that testimony, we described in detail our objections to various substantive amendments that had been included in a Bill then pending in that Subcommittee.

Moreover, we must emphasize our concern over the potential for so-called "victims' compensation" proposals to divert attention from the task of reauthorizing the Superfund cleanup program. The question of providing compensation for chronic diseases in America is a serious subject, and one that deserves

to be carefully deliberated by Congress. Because of all of the broad health, scientific, legal, economic, and social issues involved, however, it is totally inappropriate for Congress to treat this important matter merely as an "add-on" to a waste-site cleanup program.

We believe that anyone who has actually been injured from a waste site should be compensated by those who caused the injury. In fact, we support strong federal programs to regulate existing sites and to clean up inactive sites to help prevent potential injuries. We do not believe there is evidence of a need for a major new federal program as an overlay to the tort system which now exists to provide personal injury compensation. In fact, we continue to see reports of major settlements or victories for plaintiffs in tort suits in which persons have claimed injuries from hazardous substances.

We do believe, however, that all of us would benefit from more scientific information on the issue of possible waste site/disease relationships, and we are taking steps to get this information. We accordingly joined last year with the Environmental Defense Fund in a lawsuit to force the Department of Health and Human Services (HHS) to perform the health-study duties contained in Section 104(i) of Superfund. Our lawsuit resulted in a Consent Decree whereby HHS established the new agency required by Section 104(i) -- the Agency for Toxic Substances and Disease Registry (ATSDR) -- and agreed to perform the health-study functions contained in Section 104(i) on specific time-frames. The ATSDR is currently on schedule in meeting these deadlines.

A second step we have taken is to assist in the sponsorship of an independent study on possible waste site/disease relationship by the Universities Associated for Research and Education in Pathology, Inc. (UAREP). UAREP is a consortium of fifteen major university medical schools. Under the terms of our joint sponsorship of this study with other organizations, UAREP is to conduct its scientific work and draw its conclusions completely independently of CMA and any other co-sponsors. UAREP is scheduled to issue a draft report for peer review and public comment this summer.

V. Conclusion

CMA appreciates the opportunity to submit its views to the Committee on this important matter. As explained above, we urge the Committee to evaluate with EPA the amount of annual funding that EPA actually needs to administer the Superfund program efficiently, and to provide for such funding on a broader basis than the current tax system. We encourage the Committee to consider our own funding proposals carefully, for we know of no other attempt to use EPA estimates to arrive at a rational projection of annual funding needs.

STATEMENT OF

VANCE HUGHES
LEGISLATIVE DIRECTOR
CLEAN WATER ACTION PROJECT

WITH

HENRY S. COLE, PH. D. AND
DANA TULIS, M. S.

INTRODUCTION.

Chairman Stafford, members of the Senate Committee on Environment and Public Works, I greatly appreciate the opportunity to address the committee an a very critical subject, the reauthorization of the Superfund.

At the kickoff conference of the National Campaign Against Toxic hazards held in New Hamphsire this February, cleanup of uncontrolled hazardous waste sites was the number one issue raised by the 850 citizens and 40 organizations who attended. The groups told of their frustration with EPA, the lack of response, lack of information, and endless delays. A number of people told of their family's experiences with contaminated water, with illness, suffering and death. Some of the same victims addressed the Senators on this committee last month.

Since February citizens groups from 30 states have been meeting with their representatives and senators to urge them to reauthorize and strengthen the Superfund THIS YEAR. Although the current law expires in 1985, immediate action by Congress is needed to avoid a crisis next year. We now know that the size of the problem is much larger than was anticipated when the original bill was passed; the level of resources must be increased substantially to accelerate the pace of cleanups and to increase the level of protection provided for the public. Reauthorization this year will also allow EPA sufficient time and direction to gear-up to the expanded program which would begin in 1986. Unless this is done, the program will grind to a halt in 1985 while EPA waits for Congress to act.

Public frustration is entirely warranted. There has been almost no progress in solving the problem to date. Instead of getting the new Superfund Program off to a good start, it was devastated by mismangement and political abuse under Anne Gorsuch and Rita Lavelle. While the new EPA leadership is an improvement, the program continues to have major problems, (1) the pace of cleanup is far too slow, (2) the cleanups are stop-gap measures rather than permanent solutions, (3) citizens are left out of decisions on cleanups, (4) the EPA has failed to get tough with the polluters-- in terms of enforcement and in terms of recovery of Fund expenditures. CONGRESS MUST NOW MANDATE WHAT THE ADMINISTRATION HAS FAILED TO DO.

In addition, experience has shown that there are some omissions and deficiencies in the current law which we believe require correction: (1) the size of the Fund is grossly inadequate, (2) citizens are not able to sue polluters to force cleanups, (3) there are no provisions for the emergency needs of residents or to to compensate victims for out-of-pocket expenses

(4) the post-closure liability transfer provision represents a major disincentive to responsible long term management of hazardous waste.

In 1980, the Senate played the leadership role in seeing that the Superfund Law was sufficiently comprehensive to deal with a number of serious problems including accidental spills and abandoned hazardous waste sites. The same vision is needed once again to ensure that the program is put back on track, and on a track that can rebuild public confidence and get the job done.

SCOPE OF THE PROBLEM.

EPA has now identified more than 18,000 hazardous waste sites and projects that the number will reach 22,000 [1]. According to the Association of State and Territorial Solid Waste Management Officials (ASTWAMO) more than 7000 of these sites threaten public health and will require cleanup [2]. Even these numbers may be low; an EPA contractor, Fred C. Hart, Inc., put the potential number of hazardous waste sites at from 30,000 to 50,000 sites [3].

In addition, it appears that the nation may be creating a new generation of uncontrolled hazardous wastes sites. A recent study from the Office of Technology Assessment has concluded that the RCRA program is so deficient that it may well foster rather than prevent new Superfund sites [4].

These sites are contaminating the public's water supplies; a 1980 EPA study of 350 uncontrolled hazardous waste sites showed 168 communities with contaminated water supplies. The same study showed that the contamination of drinking water wells led to the closure of at least 468 individual wells and also to other adverse incidents including damage to human health, natural habitats, fish and livestock, crops, sewer systems, and soils [5]. An unreleased EPA study reported contaminated underground drinking water supplies in 29 percent of the 954 cities investigated. All of these areas had populations of more than 10,000 [6].

Dumping of hazardous wastes in surface impoundments is a major source of ground water contamination. These pits, ponds and lagoons represent nearly one-third of the sites on the current National Priority List (NPL list). The EPA's Draft Surface Impoundment Assessment gave the total number of impoundments as 180,000; about 30,000 of which are industrial lagoons likely to contain hazardous waste. The report stated that "the vast majority of states indicated that surface impoundments have already polluted groundwater, and the potential for further contamination is high. The same study showed that the

vast majority had no liners and the surface impoundment sites are located in areas where there is drinking water within one mile of the site [7].

It is extremely difficult to calculate the effects that the thousands of uncontrolled hazardous waste sites have on human health. It is difficult to sort out the many complex factors contributing to disease and adverse reproductive outcomes; the latency period for cancer and other environmentally-induced disease is often more than 20 years. There is also a lack of valid epidemiological studies on the communities around dumpsites.

However, we do know that these sites contain and are releasing large volumes of extremely toxic substances. In an anlysis of 881 sites that have been scored using the Hazard Ranking System, EPA identified more than 400 toxic pollutants. The most commonly found pollutants are known to exhibit chronic toxicity and may adversely affect human health at extremely low levels of exposure. Of the ten most frequently reported chemicals, seven are known to cause cancer, five cause mutations, and seven cause birth defects according to the EPA. The Agency has estimated that about 16 million people are potentially exposed to contamination from the 881 sites alone [8].

Information on the potential effects of hazardous waste sites on community health is beginning to surface. A scientific health study by the Harvard School of Public Health while preliminary in nature has found a consistent pattern of significant associations between the use of contaminated drinking water and the incidences of childhood leukemia, perinatal deaths, and some classes of birth defects and childhood disorders among residents of Woburn, Massachusetts. Expert Testimony on the findings was given by Dr. Zelen to this committee. The birth defects include eye and ear anomalies and "environmentally" related defects such as central nervous system problems, cleft palate, Down's syndrome, and other chromosomal aberrations. Childhood disorders were categorized as: lung / respiratory, kidney and other urinary problems, allergies / skin, and neurological / sensory [9].

Contamination of the Woburn public wells appears to be related to hazardous waste disposal. Possible sources are industrial discharges and hazardous wastes accumulated over more than a century at the 800 acre Industriplex site of northeastern Woburn, now an NPL site. The wastes were derived from the manufacturing of explosives, acids, pesticides, and other chemicals. According to EPA, many of the pits, piles and lagoons at the site are continually leaching toxic metals into the environment [10].

A relationship between hazardous waste sites and community health is also suggested by a recently-released health study of Lowell, Massachusetts residents living near the Silresm Superfund site [11].

More might be known about the effects of exposure to uncontrolled hazardous waste sites if the health studies required by the Superfund Act had been carried out. Under the Reagan Administration, only 3 of these required health studies have been initiated. In fact, the Federal Government had to be sued by the Environmental Defense Fund before the Department of Health and Human Services would undertake this task. The Agency for Toxic Substances and Disease Registry which was suppposed to coordinate the four central agencies responsible for conducting these health studies was not even established until April 1983 [12].

THE JOB IS NOT GETTING DONE.

Another reason for public concern is that the job of cleaning up the nation's chemical dumpsites is not getting done--in the meanwhile toxic chemicals continue to escape into the air and water and expose residents, particularly children and the yet-to-be-born to unacceptable risks.

o Of the more than 18,000 hazardous waste sites identified by EPA, less than half have received Preliminary Assesssments--the first step in deciding whether and what must be done [13].

o Of the thousands of sites requiring cleanup ony 546 sites are on the NPL [14].

o Only 138 Remedial Investigation/Feasibility Studies, which are required before cleanups can begin, have been completed and only about 80 are being conducted a year [15].

o Remedial action has been completed at only 6 sites [16].

o According to ASTWAMD, at present funding levels a full cleanup of all the sites needing response (an estimated 7113 sites) would take 90 years [17].

Moreover, in its choice of remedial action plans, the EPA has emphasized cost-savings rather than the long-term protection of public health and the environment. The approach being used involves containment of the wastes at the site or the transfer of some of the wastes to landfills (secondary containment). Rarely is a permanent solution such as detoxification or destruction selected [18].

The weight of evidence indicates that the containment technologies will not endure for the decades and centuries that the wastes remain hazardous. As long as large volumes of concentrated waste remain in the ground, the community is vulnerable [18,19]. When wastes are transferred and buried in a landfill (e. g. in the case of PCB contaminated soil resulting from illegal roadside dumping in North Carolina), a second community is placed at risk.

The problems with EPA cleanups are dramatized by a recent Office of Technology Assessment case study of the Seymour Recycling Company Superfund site in Seymour, Indiana [16]. This site ranked as the worst in the state, contained 60,000 drums and 98 bulk storage tanks containing wastes such as phenols, solvents and cyanides; initial studies indicated offsite contamination of soil and groundwater [20]. In its study of EPA's response, OTA found that:

o the cleanup has focused largely on surface materials (contaminated soils and wastes were removed to a depth of 1 foot even though an EPA report estimated that it was necessary to remove five feet of soil);

o the EPA negotiated a $ 7.7 million agreement with 24 of the waste generators that used the site; however, the OTA study concludes that the cost of dealing with all of the toxic materials at the site and cleaning up several contaminated aquifers may be in the $ 20 to $ 40 million range;

o the EPA settlement relieves the 24 responsible parties from all further liabilities;

o no provisions have been made for long-term operation and monitoring of the surface wastewater treatment system which feeds into the municipal system;

o much of the contaminated materials removed were probably deposited at a landfill in Emelle, Alabama-- a recent report by the U. S. Geological Survey indicates that the supposedly impermeable chalk formation into which the wastes are being dumped is fractured and "water resources of the area may become polluted and be a threat to public health."

o the citizens in Seymour received little information and have been virtually left out of the decisions on the cleanup.

RECOMMENDATIONS.

Clearly there is need for strong congressional action to reauthorize and strengthen the Superfund Law. Our

recommendations are presented in the following sections.

PERMANENT FUND

We recommend that the Senate adopt a non-expiring fund concept. The establishment of a continuing fund would represent a strong national commitment to continue the Superfund process until the job is done. We now know that there are thousands of sites needing remedial action and even under the best circumstances the cleanup process take several decades. We believe that this process is too urgent to be subjected to shifting political tides and disruptive reauthorization battles every few years.

MANDATORY SCHEDULE.

Similarly we believe that the Congress should mandate a response schedule to ensure that EPA accelerates the pace of cleanups. We recommend the following schedule: (1) Complete remedial investigation/feasibility studies (RI/FS) on all current National Priority List (NPL) sites within 18 months of enactment; (2) for new NPL sites initiate RI/FS within 6 months of listing; (3) Complete preliminary assessments of known hazardous waste sites (now about 18,000 on ERRIS list) by January 1, 1987; (5) Establish a target of 1600 sites on the NPL by January 1, 1988; (6) commence remedial action at least 150 sites per year; (7) require the Administrator to take necessary steps to ensure that remedial action at all sites currently on the NPL is completed within five years of enactment; for those sites not completed within five years, the Administrator shall publish a notice explaining the reasons for non-completion and a schedule for completion; (8) finally, EPA shall notifty the public and local government of projected schedules of major milestones for NPL sites.

A mandatory schedule is essential given the size of the problem and EPA's dismal performance to date. After nearly four years of the five year Superfund Program, only 6 waste sites out of the thousands of sites threatening public have been completely cleaned up. The greater the delay on a site, the greater are the damages and risks. Contamination continues to spread off-site, increasingly large portions of aquifers are contaminated, increasingly large populations are exposed and the potential for serious adverse health effects increases. Moreover, the costs associated with disease, well closings and cleanups increase with continued inaction.

A recent EPA document indicates that the schedule is realistic and that agency could, in fact, accomplish 1800 cleanups in the next 14 years [21] an estimate that is consistent with the mandated completion of the 546 current NPL sites in five

years.

We advocate not only a schedule but also public notification of a response schedule for all NPL communities. This will enable the public to know where they stand and will provide a legal benchmark from which to measure progress.

SIZE OF THE FUND.

The current fund is inadequate by all standards; according to EPA estimates, use of the $1.6 billion (estimated fund in the current program) would, at most, provide for the cleanup of 170 sites [22]. EPA has estimated that the cleanup of 2200 sites would require $ 16 billion [23]. However, this number is far too low for several reasons: (1) the EPA estimate assumes that 40% of the sites will taken care of by private parties, a figure that appears unrealistically high in light of the current record [24], (2) the estimate does not include the costs of long term operation and maintenance, aquifer cleanup or health studies, (3) as previously stated, the states project that more than 7000 sites will need attention. Thus the real price tag will probably exceed Office of Technology Assessment's [25] $ 40 billion upper range estimate for cleanup of the worst sites.

We believe that it will be necessary for the fund to "collect" $15 billion over the next five years. This amount will be needed to provide (1) emergency removals (2) remedial action for perhaps 700 of the worst sites (3) long term operating and maintenance costs (4) administrative costs (5) costs of health studies, emergency relief and compensation for unreimbursed medical costs.

SOURCES OF THE SUPERFUND.

We believe that the Superfund program must continue to rely on taxes generated on petroleum products, metals and chemical feedstocks. The Congress in 1980 carefully weighed the alternatives, including the waste end tax. Experience has shown that the choice of the feedstock tax was very wise. Its collection has been one of them most successful parts of the Superfund program. On the other hand, experiments with the waste end concept at the state level has been unfavorable; most states have experienced serious revenue shortfalls using this system [26]. In addition,

o the waste end system is difficult to implement due to the large number of fee collection points and the inadequacy of available data on waste generation and disposal;

o there is no evidence that a waste end fee would

provide a large enough incentive for improved waste end management to outweigh the revenue uncertainties;

o the waste end fee may be a heavy stick over small businesses--with no accompanying carrot.

We are not opposed to the inclusion of an experimental waste-end fee, however the feedstock mechanism is tried and true and must be retained as the principle source of revenue for hazardous waste cleanups. We believe that an expanded information base will be necessary to ensure that all hazardous waste is being reported and to evaluate whether the waste end tax in fact acts to move industry away from land disposal. The information should include an annual generator reporting requirement which identifies the types and amounts of waste produced and the fate of these wastes. Finally,. an alternative use for the waste end tax would be to provide low cost loans to industries adopting technologies designed to reduce the volume and toxicity of waste generation.

In order to increase fund revenues we favor an expansion of the feedstock base to include additional substances including benzene, toluene and xylene which is introduced into gasoline, as well as lead, copper, zinc, asbestos and uranium oxide. Inclusion of the gasoline additives is warranted given their toxicity and presence at Superfund sites and our recommendation to include gasoline and other petroleum products as hazardous materials in the Superfund. Inclusion of the metal "feedstocks" and asbestos is warranted given the fact that heavy metals and asbestos which are known to have toxic properties at low concentrations are found at Superfund sites. For example, EPA's investigation of the 881 sites evaluated using the Hazard Ranking System found lead at the largest number of sites, 241. Copper and compounds were found at 67 sites, asbestos at 13 sites and chromium at 15 sites [27].

Increase in the feedstock rates is justified given massive information gathered since CERCLA was enacted showing that environmental contamination with petrochemical derivitives is far more widespread than previously known.

CLEANUP STANDARDS/PERMANENT CLEANUPS.

There is considerable evidence that the cleanups currently being conducted or planned do not provide adequately for the protection of public health. There are two related problems. First, neither the law nor the National Contigency Plan (NCP, EPA Guidelines describing how the Superfund process is to be implemented) requires standards that define adequate levels of protection; EPA designs cleanups on a case-by-case basis.

Second, to date the cleanups have been designed to contain, rather than to eliminate (remove/detoxify), the hazardous wastes and large volumes remain in the ground.

The NCP calls for the least costly remedy that minimizes damages and that adequately protects health, welfare and the environment. However, there is no definition of "adequate" and therefore little assurance that cleanups will provide sufficient and uniform levels of protection. For example, under the current National Contingency Plan, it would be possible for post-cleanup contamination to exceed levels that would require corrective action for RCRA permitted landfills [28]. Given the absence of standards, the small size of the Fund and requirements for "fund balancing," it is no wonder that EPA pays greater attention to "cost" than it does to "effectiveness" in its selection of remedies.

In its attempts to hold down capital costs, EPA has based cleanups largely on (1) surface removal (2) containment of underground hazardous waste (3) isolation of the wastes from rainfall and groundwater infiltration (4) collection of leachates (5) pumping and treatment of contaminated ground water and (6) transfer to landfills. Unfortunately these methods have been shown to break down rapidly; slurry walls and liners leak, collection systems clog and clay caps are vulnerable to erosion. [28, 29]. Most importantly highly concentrated sources of materials remain hazardous for indefinitely long periods and the public continues to be vulnerable and justifiably anxious. The danger remains whether material is being contained at the primary site or transported to a secondary site.

Congress should enact proposals to promote permanenent cleanups. Our recommendations are given below.

Senators Lautenberg and Bradley from New Jersey have introduced a bill (S. 2012) which move EPA in the direction of permanent solutions. This bill would have the Superfund pick up 90 % of long-term O & M costs and delete fund-balancing provision of the present law. (Under the current law, the EPA pays 90 percent of initial costs but the states pay the entire long term O & M bills. The current arrangement, together with the across-the-board fund balancing requirement tends to bias EPA towards cleanups with minimal front-end costs.) The proposed changes would ensure that "cost effectivenes" is considered from a long term perspective and would remove an important source of conflict between EPA and the states.

We would also like the Senate to adopt a procedure that would be to require EPA to consider permanent treatment (i. e. detoxification, destruction as the preferred option; to choose alternatives which leave the wastes in the ground (at primary or

secondary sites), EPA would have to demonstrate one of the following critieria is met: (1) no other alternatives are available; (2) other alternatives are deemed to have risks even greater than those associated with hot spot containment (3) the costs associated with other alternatives are prohibitive. In cases where containment/isolation is chosen, the remediation shall be designed to prevent all offsite migration of hazardous substances for the period in which these substances remain hazardous. [For further discussion, see cit. 30].

In addition to provisions which promote permanent solutions it is necessary to designate standards or levels which establish the degree to which contaminated soil or groundwater should be cleaned; the same standards can be used to establish the degree of contamination that will be tolerated due to off-site migration following the remediation.

We favor the following approach. The most stringent level or standard of control shall apply to those substances for which appropriate standards exist (under the Toxic Substances Control Act, the Clean Water Act, the Safe Drinking Water Act or the Clean Air Act). In cases where no appropriate standards exist, cleanups should achieve background concentrations. However, in no case shall a remedial design be chosen for which the risk of death from potential exposure is more than 1 in a million. This low probability is necessary due to the large uncertainty in assessing risk (i. e. use of a probability of 1/10,000 might give an actual risk of 1/1000; see discussion in the BNA Environmental Reporter, April 20, 1984 [31]).

It is imperative that Congress establish clear, stringent cleanup standards. This need will grow if the number of private party cleanup increases. Given the pressures on industry to minimize expenditures clear guidance on "how clean is clean" is essential.

POST-CLOSURE LIABILITY TRANSFER.

CERCLA's Post Closure Liability Transfer provision in Section 107(k) should be repealed. This provision appears to allow an owner/operator of a regulated hazardous waste facility to transfer cleanup and compensation liabilities under any statute or common law to the federal government after the facility is closed for five years. (e. g. to a pot of money called the Post Closure Liability Trust Fund, PCLTF). This provision represents a barrier to prudent management of hazardous wastes and:

o removes an important incentive for firms to consider the long term consequences of their waste treatment

and disposal practices;

o contributes to the competitive advantage of land disposal over safer alternatives by keeping the price of land disposal artificially low;

o may lead to excessively large demands on the $200 million PCLTF and thus prevent adequate compensation for damages; the advantages to the victim of the Trust Fund may be illusory, particularly if the Fund is inadequately funded and money is required for cleanups first.

o is not needed; regulated sites that develop problems after closure can be remedied through citizen suits; where responsible parties are no longer in existence, the Hazardous Waste Trust Fund (Superfund) can be used with the federal government recovering expenditures from responsible parties--there is no need for a separate fund or liability transfer.

We are pleased to note that the new Superfund bill introduced in the House by Dingell, Florio, Roe and Howard contains a repeal of the post-closure fund.

LIABILITY PROVISIONS.

The enforcement system established by Superfund more than 3 years ago is beginning to prove its merit. Settlement agreements entered into by responsible parties include commitments for substantial expenditures to clean up hazardous waste sites. The strong liability provisions of Superfund are crucial if enforcement is to play its essential role in compelling clean up of hazardous waste dumps.

The certainity of strict, joint and several liability for generators, transporters, owners and operators of sites should soon stimulate the voluntary cleanups that, in combination with court ordered remedial actions, will accelerate correction of the hazardous waste problems that threaten thousands of neighborhoods across the country.

While federal court decisions have confirmed that strict, joint and several liability applies to responsible parties under Superfund, explicit recognition that Congress intended and expected this result may reduce litigation and accelerate acceptance of responsibility by those who have sought "clarification" or avoidance through the courts heretofore.

FEDERAL FACILITIES.

Some 274 Department of Defense installations filed CERCLA notifications with EPA--many containing multiple sites, some of them have dozens of sites. In addition there are numerous sites at other federal facilities, especially the Department of Defense. Because the federal facility sites have not been evaluated on the same basis as those submitted by the states, it is not possible to compare the federal and non-federal sites. However a recent analysis by the U. S. Chamber of Commerce indicates that the "average" DOD site may pose a greater threat than the "average" non-federal site [32].

Unfortunately, federal agencies, and most notably the Department of Defense have resisted EPA and state attempts to supervise their actions with regard to these sites. Moreover, EPA and the Department of Justice have a long standing policy against taking court action against non-complying federal facilities; thus a polluting facility has little incentive to alleviate the problem or to negotiate seriously, knowing that judicial enforcement actions are highly improbable.

We would urge the Senate to adopt provisions which:

o states that nothing in the bill or other provision of law is to be construed as precluding EPA or Department of Justice from bringing legal action against any other federal agency.

o stipulates that a federal agency which is sued by EPA may not be represented in the case by the Department of Justice.

o gives EPA a specified time limit for negotiating agreements with federal agencies; if an agreement is not reached within this period, EPA would be required to pursue legal action against the non-complying federal agency;

o gives citizens the right to sue both EPA and non-complying federal agencies if appropriate corrective action is not taken.

These provisions are necessary to ensure that efforts of the federal government are equal to those it demands of the private sector.

EMERGENCY RESPONSE / HEALTH STUDIES.

People living near hazardous waste sites are subjected to the damages and risks associated with toxic substances and to frustration, uncertainty and emotional stress. Here is a typical case-- the water has a bad smell or taste and testing reveals the presence of several industrial solvents. How dangerous is the water? Who will supply or pay for replacement drinking water?

What is the source of contamination? Who has been exposed and what are the risks? Could the seemingly high level of birth defects and spontaneous abortions in the area be related to the contamination? to a waste site?

Citizens often turn to local or state governments, but the response has been less than satisfactory. Local health departments and state agencies frequently lack the resources and personnel needed to respond--buck passing is commonplace. Nor does the current Superfund Law offer help.

We strongly urge inclusion of a provision in Superfund which would enable citizens to petition EPA for emergency relief and for a health study. The provision should require the Administrator to initiate a health study within 30 days after receiving the petition or explain why the study has not been initiated. In the absent of sufficient information to make a judgement the Administrator should initiate the study.

Emergency relief includes measures to terminate the exposure of citizens to hazardous substances. Measures should include but would not be limited to relocation of individuals, alternative water supplies, abatement orders and removal actions. Emergency relief provisions would be triggered if (1) a health effects study reveals that a significant risk to human health exists or (2) the Administrator determines that relief action is warranted even before a health study is completed.

HEALTH EFFECTS OF TOXIC SUBSTANCES.

We support improvements in the law that would require the Department of Health and Human Services (Agency for Toxic Substances and Disease Registry) (1) to prepare toxicological profiles for the chemicals frequently found or posing the greatest risks at Superfund sites; (2) to conduct health studies on all persons exposed to toxic substances at all sites on the NPL; (3) to establish and maintain registries of all persons exposed to toxic substances at sites and spills; (4) to conduct and sponsor research to advance methods for detecting low level exposures and for evaluating adverse health effects in sensitive as well as normal populations; (5) develop, update and maintain a comprehensive and publically accessible information system covering the published literature on the health effects of toxic substances; (6) establish, publish and maintain a complete listing of all areas (e.g., sites, surface and groundwater) closed to public use or otherewise restricted because of contamination by toxic substances.

We recommend that an allocation of at least 5 percent of the fund be usable for these health studies and health effects research.

CITIZENS PARTICIPATION.

A basic premise of the NATIONAL CAMPAIGN AGAINST TOXIC HAZARDS is that citizens have the right to participate in decisions that affect our exposure to toxic substances. Despite EPA's recent efforts to expand community relations efforts, citizens still have no real voice in the decision-making with regard to Superfund cleanups. The only real remedy is for the law to specify mechanisms for citizen's participation in a way that (1) requires EPA to provide all pertinent information on sites and cleanup plans to citizens (2) requires EPA to respond formally to citizen petitions (3) allows citizens to sue responsible parties, state governments, and the EPA and other federal agencies (4) provides funding for technical assistance to citizen groups in "NPL communities."

1. Information. More specifically we recommend that EPA release to the public in all "NPL communities" the names of all responsible parties and make available to citizens at no cost all information on the docket including sampling results, remedial investigation/feasibility studies, projected schedules, remedial action master plans, remedial design plans, etc.

2. Citizen petitions. Citizens would be able to petition EPA as follows:

o petitions for EPA to conduct preliminary site assessments and to score sites for possible inclusion on the National Priority List.

o petitions asking for modifications in Remedial Investigation / Feasibility Studies and Remedial Design Plans before they are made final. Citizens should be allowed to analyze remedial proposals and to make recommendations. EPA would be formally required to address these recommendations.

o petitions for emergency relief, addressed in previous section.

3. Citizen suits. Citizens should have the right to sue as follows:

o any person (including a federal or state agency) who is alleged to be in violation of any requirement of the law;

o any person (including a federal or state agency) who has (in past or present) generated, treated, stored or disposed of any hazardous substance, pollutant or contaminant which may present an imminent and substantial endangerment to health or the

environment;

o the Administrator of EPA where the EPA is alleged to have failed to perform any act or mandatory duty under the law.

The court would be empowered to enforce requirements, order the Administrator to perform his or her duty, restrain any person from contributing to an imminent and substantial endangerment and require affirmitive corrective action by any responsible party. We also recommend that the plaintiffs be permitted to recover fees for attorneys and expert witnesses and other reasonable expenses.

4. Citizen Technical Assistance Grants.

The ability of citizens to participate meaningfully requires access not only to pertinent information but access to the technical assistance that is often needed to understand and interpret the data. We recommend the following system:

The Administrator may make grants available to any group of individuals which may be affected by a release or threatened release at any facility which is listed on the National Priorities List under the National Contingency Plan for the purpose of enabling the group to obtain technical assistance to review and evaluate data and information pertaining to the site. Purposes of the grant include assessment of:

(1) enviornmental contamination and/or public exposure to hazardous substances eminating from the site or likely to eminate from the site;

(2) evaluation of the facility under the Hazard Ranking System;

(3) potential health effects associated with exposure associated with the site;

(4) proposed plans for response actions at the site.

The Administrator would be required to establish rules establishing the following: (1) eligibility requirements for groups affected by the release or the threatened release from the qualifying site; (2) requirements for proposals submitted by applicants; (3) requirements to ensure that the principal investigator(s) are qualified to provide the technical assistance described by the applicants.

To ensure that the technical assistance money is available to as many communities as possible, we recommend that

not more than one grant may be made under this section with respect to a single facility which is listed on the National Priorities List and that no grant exceed $40,000.

There are several important precedents for community assistant grants. For example, citizens in the vicintity of Stringfellow Pits in California received $25,000 of EPA money administered through a cooperative agreement with the state. In addition, the Love Canal home owners group received $40,000 from New York State to hire a part time toxicologist.

There a number of major benefits to the program. The level of public discussion is elevated and citizens can evaluate risks or proposals in an informed manner. The absence of understandable information is a major source of panic and confusion. Moreover, the expert hired can often promote effective communications between the public and decision-makers. For example, the toxicologist representing Love Canal residents developed a safety/evacuation plan that was accepted by both the citizens and the State. The same toxicologist was on-site during cleanup operations to serve as "the eyes and ears of the community"; as a result the public had much greater confidence in the operation and the conduct of government. [33]. Thus rather than delay and complicate the cleanup process, a better-informed public can facilitate the process.

Citizen participation provisions place the Superfund process under the watchful eyes of those who are most affected by hazardous waste sites and cleanups. This improvement will play an important role in preventing the kind of "sweetheart deals" and shoddy cleanups that we have witnessed in the past.

COMPENSATION FOR MEDICAL AND RELOCATION EXPENSES.

Victims of exposure to hazardous wastes and substances must be fairly compensated. Mechanisms currently available to citizens are clearly inadequate. (See Section 301(e) Study.) We strongly support the carefully limited administrative system and the federal cause of action described in Ms. Hathaway's testimony today.

CONCLUSIONS.

While we have presented recommendations on a number of the key Superfund issues, our statment is by no means exhaustive. We look forward to providing any clarifications or additonal suggestions to you and the committee staff. Thank you for the opportunity to share our thoughts.

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3 - Fred C. Hart Associates, "Preliminary Assessment of Cleanup Costs for National Hazardous Waste Problems," 1979.

4 - U. S. Congress, Office of Technolog/ Assessment, Industry, Technology and Employment Program, Staff Memorandum of April 6, 1984, "Groundwater Protection Standards for Hazardous Waste Land Disposal Facilities: Will They Prevent More Superfund Sites?"

5 - U.S. EPA, "Damages and Threats Caused by Hazardous Waste Sites." Washington, D.C., 1980.

6 - Engineering Times, September 1982.

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8 - see 1 , pp. 7-8.

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10- see 7, p. 6.

11- Ozonoff, David, MD, MSH et al. Boston University School of Public Health, SILRESIM AREA HEALTH STUDY, REPORT OF FINDINGS, November 22, 1982.

A health study of the Silresim Superfund site area of Lowell, Massachusetts also indicates a relationship between toxic substances and community health. The study, conducted by the Boston University School of Public Health, found increased reporting of respiratory problems, unusual fatigue and tiredness, bowel dysfunction and headaches among residents who lived within one-quarter mile of the site and especially among those who live closest to the former chemical company property. Furthermore, the Silresim-area residents were told by their doctors that they had heart problems more often than residents in other areas of the study. The frequency of respiratory symptoms, headaches and fatigue was most elevated close to the site itself. The children living near the site had increased cases of sore throats and bronchitis.

12 - Personal Communication, Verified by Mary Ann Froehlich, U.S. EPA, Superfund Contact with Center for Disease Control.

13 - see 1, p.5

14 - Association of State and Terrirorial Waste Management Officials, see 2, p. 1 of the Executive Summary.

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24 - Wessinger, H. J., Government Accounting Office, U. S. Congress, Testimony before Subcommittee on Commerce, Transportation and Tourism, Committee on Energy and Commerce, U. S. House of Representatives, March 1, 1984.

25 - See 17, p. 6.

26 - "The New York State Not so Superfund... A Program in Trouble," A report from the NY State Assembly Ways and Means Committee, December 21, 1983.

According to EPA briefing documents, states with waste end taxes, which projected annual revenues, experienced shortfalls ranging from 10 to 93 %. This informtion was given in an EPA briefing attended by H. Cole in January 1984.

27 - U.S. EPA documents via Personal Communication with Linda J. Fisher, Special Assistant for Solid Waste and Emergency Response.

28 - See 17, p. 313.

29 - Montague, Peter, "Hazardous Waste Landfills: some lessons from New Jersey," Civil Engineering-ASCE, September 1982.

30 - The legislative record (history) accompanying the law should provide specific examples of preferred options for different kinds of situations. The Administrator could also be directed to explore options which subdivide hazardous waste sites into components each receiving treatment according to the conditions present. For example, areas of concentrated hazardous waste might be removed and detoxified while areas (large volumes) of soil contaminated by migration might be stabilized and contained. It is particularly critical to eliminate "hot spots" (including containers, liquids, sludges or soil materials) that have an excessively high concentration of hazardous substances and that serve as potential "sources" for offsite contamination.

31 - Bureau of National Affairs, Environmental Reporter, April 20, 1984, p. 2270.

32 - Ken Kamlet, National Wildlife Federation, Testimony before the Subcommittee on Commerce, Transportation and Tourism, Committee on Energy and Commerce, House of Representatives, March 1, 1984.

33 - Steve Lester, Citizens Clearinghouse on Hazardous Waste, personal communication, February 1984. Mr. Lester, was the toxicologist who worked with the Love Canal Home Owners Association.

WRITTEN STATEMENT OF
HENRY S. COLE, Ph. D.

ON BEHALF OF
CLEAN WATER ACTION PROJECT AND CITIZEN ACTION

INTRODUCTION

This testimony presents the positions of the Clean Water Action Project and Citizen Action with respect to the draft Superfund reauthorization bill Submitted by the staff of the Senate Committee on the Environment and Public Works. These two organizations are participants in the National Campaign Against Toxic Hazards, a movement of more than 100 organizations to strengthen our nation's laws and programs on toxic substances and hazardous wastes. Reauthorization of an improved Superfund Law is a top priority of the Campaign for 1984.

Although the current law expires in 1985, immediate action by Congress is needed to avoid a crisis next year. We now know that the size of the problem is much larger than was anticipated when the original bill was passed; the level of resources must be increased substantially to accelerate the pace of cleanups and to increase the level of protection provided for the public. Reauthorization this year will also allow EPA sufficient time and direction to gear-up to the expanded program which would begin in 1986. Unless this is done, the program will grind to a halt in 1985 while EPA waits for Congress to act.

The discussion of the problem of uncontrolled hazardous waste sites and the need for strengthening the Superfund Lew is provided in our previous testimony to the Committee on the Environment and Public Works of May 16, 1984. In summary, there are thousands of sites that will require remedial action. There is evidence that the public may be exposed to dangerous

chemicals at many of the sites. Unless the problem is addressed rapidly and effectively, the risks, damages and costs will continue to escalate. We are pleased that the Committee has moved rapidly on a new Superfund Bill. We are generally pleased with the provisions of the bill as presented in "Superfund: Specifications and Language for Amendments," June 19, 1984. The preliminary proposal contains many positive features including a large increase in the size of the Fund. Our specific comments follow.

Increased Fund Level

The current fund size is inadequate by all standards and must be increased substantially.

According to EPA estimates, use of the $1.6 billion (estimated fund in the current program) would, at most, provide for the cleanup of 170 sites. EPA has estimated that the cleanup of 2200 sites would require $16 billion. However, this number is far too low for several reasons: (1) the EPA estimate assumes that 40% of the sites will be taken care of by private parties, a figure that appears unrealistically high in light of the current record, (2) the estimate does not include the costs of long term operation and maintenance, aquifer cleanup or health studies, (3) as previously stated, the states project that more than 7000 sites will need attention. Thus the real price tag will probably exceed Office of Technology Assessment's $40 billion upper range estimate for cleanup of the worst sites.

We believe that the Committee's proposed 5 year, $ 9 billion Fund is a major step in the correct direction. We support the the expanded feedstock tax as the principal source of revenues for the Fund. However, as stated in our earlier testimony, we believe that a minimum of $ 15 billion will be needed over the next five years. This amount will be needed to provide (1) emergency removals, (2) remedial action for perhaps 700 of the worst sites, (3) long term operating and maintenance costs, (4) administrative costs, (5) costs of health studies, emergency relief and compensation for unreimbursed costs.

We also urge the Committee to adopt a non-expiring fund concept. The establishment of a continuing fund would represent a strong national commitment to continue the Superfund process until the job is done. We now know that there are thousands of sites needing remedial action and even under the best circumstances the cleanup process take several decades. We believe that the need for cleanup is too urgent to be subjected to shifting political tides and disruptive reauthorization battles every few years.

Citizen Participation

A basic premise of the National Campaign Against Toxic Hazards is that citizens have the right to participate in decisions that affect our exposure to toxic substances. Despite EPA's recent efforts to expand community relations efforts, citizens still have no real voice in the decision-making with regard to Superfund cleanups. The only real remedy is for the

law to specify mechanisms for citizen's participation in a way that (1) requires EPA to provide all pertinent information on sites and cleanup plans to citizens, (2) requires EPA to respond formally to citizen petitions, (3) allows citizens to sue responsible parties, state governments, and the EPA and other federal agencies, (4) provides funding for technical assistance to citizen groups in "NPL communities."

The Committee's proposal would provide several important measures toward these objectives:

- o The public would have an opportunity to comment on planned remedial actions prior to final adoption; public hearings would be required;

- o Citizens would have the right to sue any company or branch of government that contributes to an imminent and substantial endangerment to health or the environment.

- o Citizens could also sue the EPA or the Agency for Toxic Substance and Disease Registry for failure to perform non-discretionary duties.

- o Funding would be available by a provision which allows Fund money to be used for information gathering and expert witnesses.

- o The proposed federal cause of action has a provision which facilitatesclass action suits where a number of citizens are affected by the same release.

We recommend that the Senate bill include several additional provisions:

- o EPA should release the names of all potentially responsible parties and make available at no cost to community members all information on the docket including sampling results, remedial investigation/feasibility studies, projected schedules, remedial design plans, etc.

- o Citizens should be allowed to petition EPA to conduct preliminary site assessments and to score sites for possible inclusion on the National Priority List.

- o EPA should be required to respond formally to all

substantial comments and recommendations made by citizens on the selection of remedial actions and on other documents pertaining to the site.

Citizen organizations and community foundations must be aided in hiring experts to help citizens interpret environmental data, remedial investigations, feasibility studies and remedial plans. We support a provision that would enable EPA to make grants available to community foundations and to citizens who may be affected by releases at NPL facilities (See Testimony of May 16, 1984).

Cleanup Standards / Selection of Remedial Plans

An extremely positive feature of the bill is that it requires EPA to establish objective standards and preferences for the selection of remedial actions. We strongly support language stating that EPA should give preference to those remedial actions which can achieve substantial reduction in the volume, toxicity and mobility of hazardous substances. We also agree that transport and disposal to a secondary land disposal site is frequently the least desirable alternative.

Implementation of this concept would result in an enormous improvement over current practices which focus on containment or redisposal. Unfortunately these methods have been shown to break down rapidly; slurry walls and liners leak, collection systems clog and clay caps are vulnerable to erosion. Concentrated sources of toxic materials remain hazardous for long periods and the public continues to be threatened and justifiably anxious. The danger remains whether material is being contained at the

primary site or transported to a secondary site.

We recommend including language that would require EPA to explain the reasons for departing from the stated preferences.

An additional provision being considered by the Committee would also move EPA in the direction of permanent solutions at hazardous waste sites. This provision (contained in S. 2012 introduced by Senators Lautenberg and Bradley) would have the Superfund pick up 90% of long-term O & M costs and delete fund-balancing provision of the present law. (Under the current law, the EPA pays 90 percent of initial costs but the states pay the entire long term O & M bills. The current arrangement, together with the across-the-board fund balancing requirement tends to bias EPA towards cleanups with minimal front-end costs.) The proposed changes would ensure that "cost effectiveness" is considered from a long term perspective and would remove an important source of conflict between EPA and the states.

A second provision requires that remedial actions are to attain a degree of cleanup (or control of future releases) to background levels. While we support this concept, the section should be strengthened to minimize certain problems. The waiver provision may be overly broad and for all practical purposes result in a de-facto no-standard situation. We therefore favor an approach that would require cleanups to be consistent with requirements and standards or levels of control established under such statutes as the Clean Water Act, RCRA, and the Safe Drinking Water Act. In addition, waiver of these standards

could be allowed only where: (1) alternative remedial action will nevertheless provide substantially equivalent protection of human health and the environment; or (2) compliance with such standards will consume such a disproportionate share of Fund resources that remedial action would not be possible at other sites which pose a significantly greater threat. However, alternative remedial action must always assure protection of human health and the environment with an adequate margin of safety.

The language in the second criterion should replace the "fund balancing language" contained in the Committee's proposal.

Compensation

Victims of exposure to hazardous wastes and substances are entitled to fair compensation for expenses, economic losses and suffering. The mechanisms currently available to exposure victims are clearly inadequate. The Committee has made an important first step in correcting this deficiency by proposing a federal cause of action which will better enable victims to receive compensation through the tort system. The proposal:

- o allows citizens to use federal as well as state courts;
- o facilitates class actions;
- o allows a wide range of relevant evidence to be admissable including animal and epidemiological studies;
- o provides for a reasonable statute of limitation (3 years after date of discovery of the loss and its connection with the release in question).

We recommend, however, that the federal cause of action contain a presumption that would enable cases to proceed to the

jury provided that the plaintiff's establish that there is a reasonable likelihood that the damages are associated with the release in question.

We also favor the establishment of an administrative program so that Fund money can be used to reimburse victims for out-of-pocket medical expenses. This provision is needed in cases where litigation is not feasible and in those situations where court cases drag on for years.

Emergency Assistance

We strongly urge the inclusion of a provision in the Superfund which would enable citizens to petition EPA for emergency relief and for health studies.

The main purpose of the emergency relief is to terminate the exposure of citizens to hazardous substances as rapidly as possible. We are pleased that the Committee proposes to address both needs in its bill. Our primary concern is that the criteria for initiating a health study given in the Committee proposal are unrealistically stringent. Specifically, criteria requiring citizens to demonstrate that the incidence of illness is likely to exceed expectation would in itself require a health study. Instead citizens should only have to show present evidence for their exposure to hazardous substances.

Health Studies / Toxicological Studies

We are pleased that Committee proposal provides for toxicological studies of hazardous chemicals commonly found at NPL and other response sites. We suggest inclusion of schedules

for the completion of these studies. We believe that the Senate has a unique opportunity to advance the state of knowledge in an area that today is filled with uncertainty.

Broadening the Coverage of Superfund

The Committee's proposes to broaden the coverage of the act in several ways: (1) costs could be recovered for responses including releases of pollutants or contaminants as well as hazardous substances; (2) pollutants and contaminants may be designated as hazardous substances within 6 months of response actions; (3) coverage would extend to petroleum released from underground storage facilities. These changes are all needed to enable EPA to respond to a broader range of incidents and sites which threaten public health.

We are convinced, however, that petroleum regardless of source represents a threat and should be covered under the law.

Federal Facilities

We support provisions of the Senate proposal dealing with federal facilities. These would ensure that the cleanup is not simply left in the hands of the federal agency responsible for a site and that EPA plays a major role in overseeing the selection and implementation of remedial action.

We recommend addition of provisions that:

o state that nothing in the bill or other provision of law is to be construed as precluding EPA or Department of Justice from bringing legal action against any other federal agency.

o provide EPA a specified time limit for negotiating agreements with federal agencies; if an agreement is not reached within this period, EPA would be required to pursue legal action against the non-complying federal agency;

o clarify the right of anyone to sue both EPA and non-complying federal agencies if appropriate corrective action is not taken.

These provisions are necessary to ensure that efforts of the federal government are equal to those it demands of the private sector.

Repeal of Post Closure Liability Transfer Provisions

CERCLA's Post Closure Liability Transfer provision in Section 107(k) should be repealed. This provision appears to allow an owner/operator of a regulated hazardous waste facility to transfer cleanup and compensation liabilities under any statute or common law to the federal government after the facility is closed for five years. This provision represents a barrier to prudent management of hazardous wastes and:

o removes an important incentive for firms to consider the long term consequences of their waste treatment and disposal practices;

o contributes to the competitive advantage of land disposal over safer alternatives by keeping the price of land disposal artificially low;

o is not needed; regulated sites that develop problems after closure can be remedied through citizen suits; where responsible parties are no longer in existence, the Hazardous Waste Trust Fund (Superfund) can be used with the federal government recovering expenditures from responsible parties--there is no need for a separate fund or liability transfer.

Mandatory Schedule

We believe that the Congress should mandate a response schedule to ensure that EPA accelerates the pace of cleanups.

A mandatory schedule is essential given the size of the problem and EPA's dismal performance to date. After nearly four

years of the five year Superfund Program, only 6 waste sites out of the thousands of sites threatening public have been completely cleaned up. The greater the delay on a site, the greater are the damages and risks. Contamination continues to spread off-site, increasingly large portions of aquifers are contaminated, increasingly large populations are exposed and the potential for serious adverse health effects increases. Moreover, the costs associated with disease, well closings and cleanups increase with continued inaction.

We recommend the following schedule: (1) Complete remedial investigation/feasibility studies (RI/FS) on all current National Priority List (NPL) sites within 18 months of listing; (2) for new NPL sites initiate RI/FS within 6 months of listing; (3) Complete preliminary assessments of known hazardous waste sites (now about 18,000 on ERRIS list) by January 1, 1987; (4) Establish a target of 1600 sites on the NPL by January 1, 1988; (5) commence remedial action at least 150 sites per year; (6) require the Administrator to take necessary steps to ensure that remedial action at all sites currently on the NPL is completed within five years of enactment; for those sites not completed within five years, the Administrator shall publish a notice explaining the reasons for non-completion and a schedule for completion; (7) finally, EPA shall notify the public and local government of projected schedules of major milestones for NPL sites.

A recent EPA document indicates that the schedule is

realistic and that agency could, in fact, accomplish 1000 cleanups in the next 14 years, an estimate that is consistent with the mandated completion of the 546 current NPL sites in five years.

We advocate not only a schedule but also public notification of a response schedule for all NPL communities. This will enable the public to know where they stand and will provide a legal benchmark from which to measure progress.

Thank you for the opportunity to present these supplemental comments. We look forward to working with you to reauthorize a strong Superfund this year.

ICWM

Institute of Chemical Waste Management

STATEMENT OF

Suellen W. Pirages, Ph.D.
Director

Institute of Chemical Waste Management

on

Reauthorization of the Comprehentive
Environmental Response Compensation
And Liability Act of 1980

Before

The

Senate Environment and Public Works
Committee

May 16, 1984

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Mr. Chairman and members of the Committee, my name is Dr. Suellen Pirages and I am Director of the Institute of Chemical Waste Management (ICWM). The Institute was formed to promote proper management of hazardous wastes and has as its members those commercial firms engaged in all aspects of waste management, including removal and remedial responses.

The Institute is pleased for the opportunity to testify before you on the reauthorization of the Comprehensive Environmental Response Compensation and Liability Act.

Our testimony emphasizes the need to reauthorize an expanded CERCLA cleanup program as soon as possible. Without question, national concern for proper management of hazardous waste has reached gigantic proportions, and rightly so. Not only has the potential threat from mismanagement of hazardous waste been recognized, but a significant dent in cleanup efforts has not been made either to remedy problems of past management or to license facilities in accordance with tough new standards under the Solid Waste Disposal Act. For example, not a single land disposal facility has received its final permit. Small wonder that the public does not distinguish between the "problem" sites of the past and the "solution" sites licensed under the Solid Waste Disposal Act. These two programs are inextricably entwined. Progress in licensing management facilities and cleanup efforts will reassure the public that the job can be done and done right.

We are beginning to see some acceleration of the Superfund cleanup process and with passage of S.757, implementation uncertainties may be removed and progress in permitting activities accelerated as well. It is essential that we keep the r ntum going in both programs.

We believe there are several elements to be included in CERCLA reauthorization bill this year, and recommend to this committee that the bill be restricted to these issues:

- o an increase in the size of the fund with revenues coming from proven reliable sources;
- o realistic legislative targets for clean up actions; and
- o improvement in some of the processes used to select remedies at specific sites.

Our testimony addresses these issues and the Post Closure Liability Fund.

EXPANSION OF FUND AND FUND FINANCING

Nearly everyone would agree that the fund as authorized by CERCLA in 1980 will not be sufficient. Many more sites have been identified for inclusion on the National Priority List (NPL). Very few sites on the NPL have received remedial attention, and at only a few have cleanup

activities been initiated. There is only a year and a half left in the original five year program. Government is often criticized for throwing money at problems, but for the NPL more money is the pressing need. If assuring funding for Superfund is the prime objective, the ICWM must insist on a stable and adequate funding source. The present feedstock tax has proven to be administratively simple, a steady source of revenue, and has imposed a minimal, yet broadly shared burden. Because the IRS must track only about 800 taxpayers in collecting the feedstock tax, it has not been necessary to increase the IRS budget. Nor has the burden on the taxed industry been disruptive. The tax represents only one tenth of one percent of the annual revenues of American chemical companies.

A waste-end tax has been proposed as a substitute or supplement for the feedstock tax. These taxes undeniably have a political and emotional appeal but their real value is questionable. In fact, waste-end taxes can create undesirable distortions in current waste treatment and disposal practices. The Institute opposes waste-end taxes both on practical and policy grounds. First and most important, as a revenue raising measure, waste-end taxes have not been successful. In every case where applied, states have realized significantly less revenue than forecasted. In at least one case, collection costs even exceeded revenues. In all cases, the states have been forced to search for additional funds.

There are several possible reasons for revenue shortfalls: 1) estimated quantities of wastes on which the tax fees were based may have been in error; 2) the influence of a tax itself on waste production and management tends to reduce the incoming revenue; 3) illegal evasion of the tax may be a factor; 4) loopholes in the tax rules reduces the amount of taxable wastes. The exact reasons for revenue shortfalls are unknown, but there seems to be general agreement that a waste-end tax will not provide a reliable and predictable source of revenue.

One of the major reasons Congress adopted a feedstock fee, rather than a waste-end tax in 1980, was the relative immaturity of the federal hazardous waste program, and the possibility that a waste-end fee might provide incentives for noncompliance. Although there has been progress in identifying and tracking wastes, the possibility for exemptions from system control remain. For example, a waste-end tax could increase the economic incentive for an industry to seek a political solution either by legislatively exempting their wastes, or through regulatory delistings. Thus, a reduction in the universe of hazardous waste would require increases in the waste-end tax. Serious inequities among industries likely would result. Also, if a consideration of hazard levels were not incorporated into a tax rate, certain industries could be disadvantaged.

The philosophy of using waste-end fees to provide incentives for proper waste management disintegrates when the actual administration of such fees is considered. Let me provide two examples. First,

large amounts of dilute aqueous waste are disposed in underground injection wells. Depending on discharge limits, some of these waste could be discharged either directly to surface waters or into publicly owned treatment works. Should this occur as a result of imposing a waste-end tax, the main effect would to be divert waste from proper management and control to drinking water sources. Second, some waste treatment processes increase the volume of the waste while decreasing the level of hazard. In this case, a higher tax would be paid on less hazardous waste, thus resulting in disincentives for treatment.

There are a number of practical administrative questions of particularly concern to the commercial waste disposal industry, which handles diverse waste streams. For example, there are vast differences in definitions of hazardous waste between federal and state programs. It is unclear how a tax could differentiate among these differences. Record keeping would be highly complex. At off-site facilities, operators will be faced with determing which wastes are subject to the tax, and which are not. He will have to rely on the generator identifying the origin of those wastes. For on-site disposal facilities, where manifests may not be required, verification of taxation will be difficult.

Our hazardous waste program is finally beginning to work as Congress envisioned. However, waste generators already are reacting to the increased cost of treatment and disposal by changing production processes to reduce waste generation, by recycling or recovering

practices. When all facilities are given final permits under the new amendments to the Solid Waste Disposal Act, the economic incentive of regulatory compliance will be that much stronger. Generators do not need the incentives that many contend a waste-end tax might provide. The program is just beginning to work; it seems to be a poor time to initiate experimental practices.

IMPROVEMENT IN REMEDIAL ACTION PROCESSES

We believe there are several provisions that should be included in a Superfund bill that will improve site cleanup. First, ICWM suggests that the existing federal/state cost sharing formulas implemented by EPA may distort selection of the remedial action alternative. With existing policy, the states have a natural desire for complete removals, which will avoid any long-term operation and maintenance costs. EPA, on the other hand, may have incentives to prefer measures that are less expensive initially, but will require extended vigilance to maintain. Selection of the appropriate remedy is difficult enough without these intergovernmental tensions and should be primarily based on environmental factors. Therefore, we would support legislative assurances to the states that 90 percent of all remedial action costs (except where states are owner and operator) -- including operation and maintenance -- would be a federal responsibility.

The ICWM supports efforts by Congress to encourage expeditious cleanup activities, such as legislated timetables of some kind for sites on the National Priority List. However, these schedules should be realistic, structured on a "pipeline basis", and provide adequate

ability for the administrator to justify publicly any deviation from the timetables. However, I would emphasize that there are two potential problems if particularly stringent or unrealistic time schedules were to be imposed by Congress. First, remedial action at any site follows a sequence of events: initiation of remedial investigation studies, evaluation of feasible cleanup alternatives, choice of remedial actions, initiation of cleanup. If deadlines are imposed on any one of these steps (e.g. deadlines for completing remedial investigations at all NPL sites), a result could be to slow down actual cleanup actions at any particular site.

Second and perhaps most important, imposition of unrealistic deadlines could force the use of short-term and less effective remedial strategies. While long-term protective technologies (e.g., treatment technologies) are available, the application at CERCLA sites may require additional development time. Although expeditious remedial action is desirable, use of long-term protective technologies must be encouraged and time schedules established to accommodate the use of these technologies.

The Institute supports development of criteria and standards for cleanup, however, an issue of concern is the nature of those standards and their specific application in the remedial process. Notwithstanding the existence of some standards established for other environmental laws, the ICWM position is that once background concentrations of major contaminants have been established at a site,

cleanup levels should be comparable to these background levels. I must emphasize that ambient standards established for a hazardous constituent within a specific environmental medium should not be applied indiscriminately as the standard for all other environmental media.

Another serious issue is the potential use of concentration "criteria", as though they were environmental standards. Specific examples of such criteria are the water quality criteria and health advisories (Significant No Adverse Response Level) established by EPA for a variety of chemicals. I would stress that these criteria have not undergone the rigorous formal rulemaking process. Both EPA and the scientific community candidly recognized that these criteria were developed only after a minimal internal agency review without fully addressing the scientific adequacy or technical justifications. It is most troublesome that there is a tendency by municipalities and states to use these advisory-type criteria in determining action on chemicals found in drinking water and in some instances applying them as standards. The ICWM would urge careful evaluation of appropriate use of environmental standards and advisory criteria before issuing blank mandates of their implementation in remedial actions.

POST CLOSURE LIABILITY FUND

The ICWM would like to address another issue which is contained in CERCLA, but actually is essential to the Solid Waste Disposal program.

The Post Closure Liability Fund was created by Congress to ensure monies always would be available for any cleanup and compensation to injured parties at sites being permitted today. This Committee, particularly Senator Randolph, was instrumental in its creation, and the ICWM recognizes that the fund is as important today as it was in 1980.

With amendments to the Solid Waste Disposal Act that will restrict certain hazardous wastes from land disposal, treatment processes will be used more widely. However, there will always be a need for some land disposal capacity for the disposition of treatment residues and for those wastes that cannot be treated or destroyed. Certainly in the near future, treated waste residues will continue to be disposed as though they were hazardous wastes. For any land disposal facility, there is a continuing liability. However well a facility is sited, engineered, operated and closed, it cannot be proven beyond a doubt that there will never be a need for corrective action, or compensation to the public for possible injuries. The probability may be low, but certainly not zero. The public has the right to expect that there will be funds available to meet these long term liabilities, should they ever arise.

Mechanisms for financial responsibility are essential to a program for regulating land disposal sites. The Post Closure Liability Fund is such a mechanism. It is a prepaid, pooled-risk fund managed by the federal government. Monies are collected from an operator during the active life of a facility. Those sites that operate with a final

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Solid Waste Disposal Act permit, remain trouble-free, and do not pose a threat to public health can qualify for the Fund. The operator remains responsible for monitoring and maintenance for thirty years after closure of the facility.

Today, there are no financial mechanisms, either actually or conceptually available, that would meet these long-term liabilities. For example, environmental impairment liability insurance continues to be sold on a year to year basis, with no guarantee of renewal. It is not available at all for facilities after closure. Yet, it is generally agreed that cost of long-term protection should be internalized in the cost of disposal, as best as these costs can be predicted. This internalization eliminates any unintentional subsidies of land disposal. Since the probability will be low that any one site will require subsequent expenditure of funds, the concept of a pooled fund is appealing.

A proposal is pending in the House to abolish the Post Closure Liability Fund. The ICWM considers this proposal as misguided. First, the argument has been made that existence of the Fund encourages planned obsolescence at disposal facilities, that sites will only be designed to last as long as the operator retains liability. This is not true. If the Fund were abolished today, the level of performance as required by the federal government for disposal facilities would not change. The stringent regulations developed by EPA would still be met as a condition for receiving an

operating permit. Second, if there is not a guaranteed source of monies to cover residual risks, any future remedial action would have to be initiated through Superfund -- either as an enforcement action against the operators or a fund-financed cleanup action. Of course, a enforcement action is only possible if facility owners or operators still exists. Because the extent of environmental contamination for permitted sites is likely to be much less than at current CERCLA sites sites, a fund finance action is possible, but unlikely. Will Superfund still be in existence decades from now, when problems might be expected to occur? Elimination of the Post Closure Liability Fund means playing in a lottery -- taking the chance that an operator will be able to pay for cleanup and compensation. How much more effective it is for the public to have a ready source of monies available without question, without necessary administrative enforcement actions, and without litigation, to address any environmental problems at the sites immediately. The asbestos plaintiffs in the Manville case would have benefitted, if such a fund had been established forty years ago.

There are some aspects of the fund that could be re-evaluated. Currently, the fund is capped at $200 million. Perhaps this is not an appropriate ceiling. An increase in the cap, or removing it altogether could be considered. No one can predict today what the demands on the fund might be, but it is essential that the size of the fund be perceived as sufficient to cover potential cleanups and compensation. By enabling industries that must dispose of hazardous waste to manage their long-term liabilities, responsible companies will be able to continue operations and will be encouraged to engage in the best wastes management practices.

ICWM

Institute of Chemical Waste Management

May 29, 1984

Senator Jennings Randolph
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Senator Randolph:

On behalf of the Institute of Chemical Waste Management, I am pleased to respond to the written questions submitted by you for inclusion in the hearing record of the Senate Environment and Public Works Committee on May 16, 1984. Our response is based on information obtained from the Internal Revenue Service and the U.S. Environmental Protection Agency.

According to the Internal Revenue Service, there were fifty entities paying the tax for the Post-Closure Liability Fund since its implementation in October 1983. The U.S. Environmental Protection Agency (EPA) estimates indicate that there could be from 450 to 500 taxpayers who should be contributing to this trust fund. The reason for this discrepancy is unclear. It could be that potential taxpayers are unaware of the existence of the tax. More than likely the discrepancy is due to a lack of enforcement within a new program.

Using the most recent EPA data (based on the 1981 waste generation survey), the taxable amount of hazardous wastes is roughly 16 million dry weight tons. This volume could generate $33 million annually.

At present, there are some problems with interpreting what is a "dry weight ton". Neither the EPA nor the Internal Revenue Service has developed guidelines or criteria for calculating a dry weight ton. Such criteria particularly are needed for those facilities that handle large volumes of dilute liquid wastes (e.g., underground injection wells and surface impoundments). If either agency would identify a formula for converting to "dry weight tons", even if arrived at arbitrarily, payment of the tax would be accomplished in an easier and more equitable manner. If individuals must identify an appropriate test to determine dry weight tonnage from actual amounts of hazardous waste handled, most might prefer to pay the $2.13 tax on the full volume disposed.

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It is too early to determine whether the Post-Closure Liability Fund tax is successful. The program has been in place for only six months. This is not sufficient time to have corrected any inherent collection problems, nor identify any potential data recording errors within the Internal Revenue Service. Such problems are common to any new administrative program.

If you have further questions, I would be happy to respond to these.

Sincerely,

Suellen Pirages

Suellen Pirages, Ph.D
Director

SP/ec

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TESTIMONY OF JANE L. BLOOM,

NATURAL RESOURCES DEFENSE COUNCIL, INC.

BEFORE THE

SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

HEARING

ON OVERSIGHT OF THE

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION,

AND LIABILITY ACT (SUPERFUND)

May 16, 1984

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The Natural Resources Defense Council, Inc. (NRDC), a nonprofit environmental organization with over 40,000 members and contributors nationwide, appreciates this opportunity to present our views regarding reauthorization and improvement of the Comprehensive Environmental Response, Compensation and Liablity Act (Superfund). NRDC is dedicated to the protection of human health and the environment from the hazards posed by toxic substances released into the air, land and water.

In furtherance of these goals, NRDC has actively monitored EPA's implementation of the laws controlling toxic and hazardous substances, including the Resource Conservation and Recovery Act (RCRA) and Superfund. Reauthorization of Superfund, the hazardous waste site cleanup law, is one of NRDC's top priorities this year, and we look forward to working with the Committee towards strengthened legislation in the coming months.

The important benchmarks for judging the adequacy of the current Superfund are, we believe, the degree to which the program is preventing or halting public exposure to releases of toxic chemicals or, where exposure has already occurred, is addressing the needs of victims of toxic exposure. In this regard, it is important to note that the major source of public exposure to hazardous substances at many sites will be contaminated groundwater; this key fact affects most of the issues we raise, including the level of funding needed, the pace of cleanup and victim compensation.

Half of the nation relies on groundwater daily as a source of drinking water. As is now widely becoming recognized, however, groundwater is increasingly threatened with contamination. According to EPA, 60 percent (526 sites) of the 881 sites evaluated thus far for inclusion on the National Priority List (NPL) already have contaminated groundwater, exposing up to 8.2 million people.[1] At about 350 of these sites the contaminated groundwater is the sole source of drinking water for nearby residents. Moreover, EPA has reported that, already, 28% of the water supplies in a random survey of metropolitan water systems were found to be contaminated by one or more toxic organic chemicals.[2]

This spreading contamination is now understood to be the result of past -- and current -- improper land disposal of hazardous wastes. The longer these wastes are allowed to remain at the site, the more widespread the problem can become and the more difficult and expensive to remove it. Groundwater cleanup can cost millions of dollars per site and require up to 20 years to

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1 Memorandum, "Superfund Task Force Preliminary Assessment," from Alvin R. Morris, Director, EPA Superfund Task Force, to Alvin L. Alm, Deputy Administrator and Lee M. Thomas, Assistant Administrator for Solid Waste and Emergency Response, U.S. Environmental Protection Agency, December 8, 1983 (hereinafter, Superfund Task Force Preliminary Assessment).

2 For an up-to-date summary of pertinent figures on groundwater contamination, see opening statement of Senator Dave Durenberger on S.2649, Safe Drinking Water Act Amendments, before the Subcommittee on Toxic Substances and Environmental Oversight (May 14, 1984).

complete. Thus, unless expeditiously halted or removed through thorough surface and subsurface cleanup, this contamination threatens to expose millions more to toxic and life-threatening chemicals.

Judged against these standards, it is apparent that the present program has serious deficiencies. The Fund is too small to ensure cleanup at all hazardous sites. The pace of cleanup is dangerously slow, thus increasing the likelihood of public exposure to hazardous substances. No uniform, minimum standards currently exist to ensure adequate cleanup. Victims of toxic exposure lack adequate procedures to obtain equitable compensation. Dumpsites owned or operated by the federal government are not being forced to clean up. These deficiencies make plain that the program has not achieved the cleanup envisioned by Congress and underscore the need to renew and improve the Act.

We believe that Superfund needs to be significantly strengthened this year to correct these problems before any further damage is done to the environment and to public health. Because deficiencies in the current program are so readily apparent and so severe, reauthorization of the Act is needed this year and should be not postponed until Superfund is due to expire. Our recommendations for changes to the present law are discussed in detail below, and can be summarized as follows:

1) the pace of cleanup must be accelerated by putting EPA on a schedule for completing work at priority sites and assessing all others;

2) the size of the Fund must be increased to at least $9 billion over 5 years and preferably to $2.4 billion per year for as long as the job takes;

3) cleanup standards should be explicitly mandated in Superfund;

4) the feedstock tax should be retained as the primary funding source;

5) compensation for victims of toxic exposure must be provided; and

6) provisions should be added to ensure rapid cleanup at federal facilities.

I. The Pace Of Cleanup Must Be Accelerated Dramatically.

EPA's implementation of the Superfund program has done little to minimize the growing threat of groundwater contamination and may in fact have increased it by delaying cleanup. The program's cleanup record is notoriously poor. EPA now estimates that there may be as many as 22,000 potentially hazardous sites, 1,400-2,000 of which are expected to be dangerous enough to be included on the National Priority List (NPL).[3] At present, there are 17,000 known sites on the Agency's ERRIS list and 546 sites on the NPL. Yet, four years after enactment of Superfund, only six site cleanups have been completed. At the current pace, cleanup at these sites cannot be expected to commence, much less conclude, in the near future. Indeed, only 10 percent of these

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3 See Superfund Task Force Preliminary Assessment.

sites have received a thorough investigation and almost two-thirds lack even a preliminary site assessment.[4]

Clearly, the pace of site assessment and actual cleanup must be drastically increased. Given EPA's lethargic approach toward site remediation to date, a mandatory cleanup schedule should be imposed on the Agency to ensure prompt initiation of site assessment and, where necessary, cleanup at all ERRIS and NPL sites.

We recommend either that any schedule be limited to the completion of surface cleanup and the initiation of groundwater assessment and cleanup, or that the schedule require completion of all cleanup unless EPA finds that adequate groundwater assessment or cleanup will take longer than the schedule allows. While we favor putting the Agency on a schedule, it is important that groundwater assessment and cleanup be thorough. As mentioned above, such assessment can take one to two years. Completion of groundwater cleanup can take 10-20 years or longer. Thus, for example, to require the Agency to complete remedial action at all NPL sites within a shorter time period could result in cleanups which appear complete but which leave the most important part of the job, groundwater cleanup, for the indefinite future.

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4 As of the end of 1983, 2,197 sites had received site investigations preliminary to ranking under the Hazard Ranking System, and 7,100 had undergone a preliminary assessment only. Chart, "Superfund Program: Preliminary Assessments (PA's) and Site Inspections (SI's) Completions," accompanying Statement of Lee M. Thomas, Assistant Administrator for Solid Waste and Emergency Response, U.S. EPA, before the Senate Committee on Environment and Public Works, April 25, 1984.

II. The Fund Is Too Small.

Not only is the pace of implementation far too slow, but the current $1.6 billion fund is simply inadequate to clean up all existing sites. EPA conservatively estimates that between $8 and $16 billion will be needed for cleanup of known sites.[5] A bill introduced in the House last week by Congressman Florio would provide $9 billion over 5 years. This is clearly the minimum that can be realistically expected to make a dent in the problem.

Moreover, five years, the current duration of the fund, is in all likelihood too short a time to resolve the inactive site cleanup problem. Groundwater cleanup alone will take decades at some facilities.[6] A recent staff memorandum by the Office of Technology Assessment (OTA) warns that due to deficiencies in the groundwater protection provisions of EPA's land disposal regulations under RCRA, today's hazardous waste facilities may be tomorrow's Superfund sites. Because these regulations are not designed to prevent groundwater contamination, and sanction land disposal practices known to contaminate groundwater, OTA staff concludes, "RCRA groundwater protection standards are not likely to prevent land disposal sites from becoming uncontrolled sites

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5 Superfund Task Force Preliminary Assessment.

6 In testimony before this Committee, for example, New Jersey officials estimated that groundwater cleanup at two of the State's Superfund sites will take 10-15 years. Statement of George J. Tyler, Assistant Commissioner for Environmental Management and Control of the New Jersey Department of Environmental Protection (April 25, 1984).

that will require cleanup under Superfund."[7] We agree with this assessment and anticipate that a Superfund will be needed for many years to come.

For these reasons, we believe that a better alternative to retaining the current 5-year term would be to provide a five-year guaranteed term, after which the Fund would automatically continue for five-year increments if, one year prior to its expiration, a significant number of sites remained to be cleaned up. This alternative has the advantage of preventing the Fund from expiring inadvertently even though there remains a need for it, while providing a year's lead time to industry and EPA.

III. Cleanup Standards Should Be Explicitly Mandated By Superfund.

Currently there are no uniform EPA standards that prescribe the level of site remediation that must be achieved under the Superfund program. The National Contingency Plan (NCP), which provides the blueprint for cleanups under the program, fails to answer the critical question, "how clean is clean?" Instead, the NCP permits regulators to use their discretion to determine on a site-by-site basis whether adequate cleanup has been performed. As a result, there is no assurance that a uniformly high level of site cleanups will be achieved or that cleanups will meet federal

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7 Staff Memorandum, "Groundwater Protection: Standards for Hazardous Waste Land Disposal Facilities: Will They Prevent More Superfund Sites?" Office of Technology Assessment, U.S. Congress (April 6, 1984).

standards under other applicable environmental laws, including the Clean Air Act, Clean Water Act, and Safe Drinking Water Act.

The public has a right to expect that cleanup has decontaminated the air, soil, surface and groundwater at a site to the maximum extent practicable, and that cleanup at one site will be no less thorough than the site remediation conducted at other sites under the program. Of particular importance is the assurance that cleanup will not stop at halfway measures. Due to the costliness and difficulty of groundwater cleanup at some sites, there may be a temptation to conduct surface cleanup only, leaving cleanup of pernicious groundwater contamination for a later day. This short-sighted cleanup strategy could actually result in far greater expense later on, both in terms of the costs of cleaning up contamination that has already spread, and in terms of the potential damage to human health and need to compensate victims.

To ensure that thorough cleanup is performed, NRDC recommends that Superfund be amended to include a provision specifying the standard for cleanup that must be achieved at all facilities, whether privately or federally owned. The appropriate standard in most cases would be that established under other applicable federal laws (e.g., Safe Drinking Water Act, et al.). In addition, to ensure that the "cost-effective" remedy does not become merely the least costly solution, this provision should specify that EPA must consider the permanence of the solution and alternative treatment technologies to the

maximum extent practicable. We would also advise Congress to make clear that where a groundwater source of drinking water is found to be contaminated, the remedy selected by EPA must provide for cleansing the groundwater.

IV. The Feedstock Tax Should Be Retained As The Primary Source Of The Fund.

While we recognize the need to provide incentives for waste reduction, we believe that the reliability of the funding source should be the paramount consideration in choosing a funding mechanism for Superfund. The feedstock tax which presently supplies the Superfund has proven quite reliable in collecting the sums anticipated by Congress. We believe it should be retained as the primary funding mechanism for Superfund.

By contrast, the experience of numerous states with mini-funds financed by waste-end taxes demonstrates that these sources cannot be counted on to produce at or even near the level of funding intended. In New York, for example, revenues generated by a waste-end tax fell over 60 percent short of the state's $10 million goal. New Hampshire alone suffered a 93 percent shortfall since the State enacted a waste-end tax in 1971. Cumulative state shortfalls have been 42 percent of estimated revenues in states utilizing the waste-end approach.

In addition to proving a less than certain source of revenue, waste end tax-based Superfunds are much more difficult to administer than feedstock taxes due to the large number of generators . Moreover, the waste end tax structure creates an

incentive for under-estimation of wastes generated. Accurate generator data are needed to prevent underreporting, but these data are not easy to amass. EPA's own generator data do not appear to be particularly reliable, however. Last fall, the Agency released preliminary data showing that four times more hazardous waste was being generated in the U.S. than the Agency had previously believed. Only a few weeks ago, the Agency reported that the final data showed a 75% increase in waste generation since the Agency's announcement last fall. Given uncertainties in EPA's data base, it will be a difficult task to accurately predict and collect revenues anticipated from a waste end tax. The feedstock tax does not pose this difficult problem.

We strongly support the creation of incentives for waste reduction. But these should not be created at the expense of generating sufficient funds to finance cleanup of sites that pose a danger to health and the environment. Indeed, the most effective incentives to reduce the amount of waste generated are those already being incorporated by Congress into amendments reauthorizing RCRA: the provisions requiring EPA to phase out hazardous land disposal.

For all of these reasons, we believe that Superfund's current funding source should be retained as the primary, if not the only, tax source. However, should the Committee decide to adopt a combined front-end/waste-end approach, we strongly urge that the waste-end tax comprise only a small portion (less than 20 percent) of the Fund.

V. Compensation Must Be Provided For Victims Of Toxic Exposure.

NRDC believes that providing adequate and equitable compensation for victims of toxic exposures must be a primary objective of the current Superfund reauthorization. The seminal 1982 Report to Congress, mandated under §301(e) of CERCLA, concluded that uncounted and potentially numerous individuals may fall victim to diseases, disability or death as a result of exposure to toxic substances at waste sites; however, existing remedies are inadequate to provide for "toxic tort" victims.[8] Superfund ingores these victims, leaving them to State tort remedies which may often be insufficient.

To make Superfund fully responsive to the needs of injured persons and exposed communities, we believe that a victim compensation scheme that would operate on three different levels should be provided. The objective of the first level should be to provide prompt site and health assessment at sites where exposure to hazardous substances exists and to terminate exposure at harmful levels. The first level would provide an exposed community with information necessary to determine whether their health is being compromised. Preliminary health studies and site evaluation would be required where a community could present the Administrator with evidence that persons were being exposed to hazardous substances. If the results of these preliminary

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8 Injuries and Damages from Hazardous Wastes, Analysis and Improvement of Legal Remedies, 97th Congress, 2d Sess. (Sept. 1982).

assessments showed the potential for a significant human health risk, further studies would be undertaken. Where the results of these tests or other studies show that exposure at indicated levels is presenting a significant risk to human health, prompt emergency response would be provided to the community to stop further exposure. Thus, for example, where exposure occurred through drinking contaminated groundwater, alternative drinking water supplies would be provided. Other means of halting exposure, such as relocation of families or waste removal actions, should also be initiated in appropriate circumstances.

The purpose of the second level would be to reimburse individual victims of toxic exposure for their out-of-pocket medical costs and lost earnings, without the need to engage in lengthy litigation. These immediate needs must be taken care of in a streamlined, administrative procedure, even though tort remedies may be available, because many victims may not have the resources to pursue tort remedies or may not be able to wait until litigation is over to pay for these costs.

We recommend that, because coverage is so limited, a low threshold be established for recovery; unquestionably, compensation should be provided if the victim can prove exposure at a level that indicates a significant health risk, injury, illness, or death, and a reasonable likelihood that injury of the kind he suffers can be caused by the substances he was exposed to. This showing can be costly to make, and may in fact be too burdensome for some claimants, expecially if little is known about the

health effects produced by the chemical or combination of chemicals in question, or if costly studies to determine levels of exposure have not been performed. However, at least in cases where studies have been performed for the community under the first level of the compensation scheme, qualified claimants should be able to meet this burden. Because the first two levels are compatible and non-duplicative, victims in communities where a significant health risk has been identified under the emergency response provisions should not be barred from seeking compensation through the administrative scheme.

A third level, consisting of a federal cause of action, should also be created. The federal cause of action would allow victims to seek the full range of tort damages, including those for pain and suffering. Currently, victims must resort to state tort actions, which vary widely from state to state. Thus, under the current system, the same set of facts may result in recovery in one state but not another. This obvious inequity must be removed by creation of a federal cause of action that could be brought in either state or federal court. Creation of the right to sue in federal court need not preempt state tort law, and would greatly increase victims' access to the courts.

As the §301(3) report and others have concluded, under the present tort system there are numerous factors which may unfairly preclude recovery to deserving litigants. These include (1) statutes of limitation which run from the time of exposure rather than from the time plaintiff knew or should have known of his

toxic-induced injury; (2) outmoded evidentiary rules which result in exclusion of critical evidence, and (3) the difficulties of proving a causal connection between injury and exposure under traditional burdens of proof.

We believe that the federal cause of action should address each of these concerns explicitly. First, a uniform "discovery rule" statute of limitation should be established which runs from the time of plaintiff's knowledge of injury. Thirteen jurisdictions currently apply this rule, which ensures that the long latency period associated with toxic-induced diseases will not bar a cause of action prior to manifestation of the plaintiff's illness or injury.[9]

Second, a table of evidence should be included that specifies relevant evidence for purposes of proving causation. Often evidence relevant to demonstrating a causal connection between exposure and injury, such as epidemiological studies and animal bioassays, is excluded from evidence due to the hearsay, reliability and relevance rules applied by some jurisdictions. These forms of evidence, as well as any other data that tend to establish that exposure causes or contributes to the plaintiff's injury, should be included in the table of relevant evidence to ensure the admissibility of this evidence in federal actions brought in either state or federal courts.

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9 These jurisdictions are Arizona, Colorado, Florida, Hawaii, Puerto Rico, Louisiana, Michigan, Montana, New Jersey, South Carolina, Texas, West Virginia and Wyoming.

Third, a presumption should be incorporated to lighten the plaintiff's burden of going forward with the evidence. We favor a presumption which would shift the burden to the defendant to disprove causation if the plaintiff could make a showing comparable to that prescribed for the administrative scheme, described above. The institution of a similar presumption has been recommended in the §301(e) report, which concluded that difficulties in proving causation can preclude meritorious cases from ever being heard by a jury. The presumption would not alter the burden of persuasion, which the plaintiff traditionally bears; thus the current rule, that plaintiffs in civil actions must prove their case by a preponderance of the evidence to recover, would still apply.

Again, we want to stress that the third level of compensation, like the other two levels described above, should be viewed as an additional, rather than exclusive, remedy. Although the Act should preclude double recovery, the tort and administrative remedies serve different needs and purposes, and victims should be able to pursue them in combination or separately without relinquishing their rights to seek alternative forms of compensation. We would strongly oppose the requirement that a victim be required to make a binding election.

VI. Federal Dumpsites Must Be Cleaned Up.

A major shortcoming of the present Superfund program is its failure to ensure cleanup of uncounted dumpsites located on 517 facilities owned or operated by the federal government. These facilities are located in every part of the United States.[10] Not enough is known about the degree to which these sites are threatening groundwater, polluting the air or endangering lives, because few if any federal sites have undergone thorough site investigations, and to date no federal site has been ranked by EPA using the Hazard Ranking System, or included on the NPL.[11]

However, due to the seriousness of contamination problems caused by years of sloppy waste disposal by federal agencies, notably the Departments of Defense and Energy (DOD and DOE), some of these sites have recently come to public attention. One example that clearly illustrates the potential magnitude of problems is Air Force Plant #4, located near the town of White Settlement, near Fort Worth, Texas. Disposal practices used for solvents and heavy metals at ten potential hazardous waste sites on the property have resulted in contamination of the aquifer that is a major source of drinking water for the town. This problem went largely unnoticed until an anonymous tip to town officials in 1982 revealed the danger. EPA's repeated requests to the

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10 EPA lists 517 federal facilities on the ERRIS list, as of January 4, 1984. Because each federal facility may contain a number of discrete dumpsites, these 517 federal facilities could in fact represent a far larger number of sites in need of cleanup.

11 EPA recently announced that it intends to begin ranking federal sites for inclusion on the NPL.

facility to supply information concerning the site were ignored for many months before action was taken to remove contaminated soil.

This example is one of a number of serious problems at federal sites that has come to light. Other examples include, U.S. Air Force missile plants in Tucson, Arizona, where toxic trichloroethylene and chromium have leached into the soil, endangering 60 city water wells, as well as DOE's Y-12 weapons plant at Oak Ridge, Tennessee, where mercury and PCB's, as well as other wastes, have been dumped into unlined ponds and landfills, causing groundwater and nearby surface water pollution.

There is reason to believe these dangerous practices may be quite widespread, necessitating costly and complex cleanup at many federal installations. DOE, for example, has until recently taken the position that all of its facilities subject to the Atomic Energy Act (i.e., all DOE nuclear weapons production plants, fuel fabrication and reprocessing plants, and nuclear weapons research and testing facilities) are totally exempt from the requirements of RCRA.[12] Thus, there is a reasonable likelihood that some of these sites will one day require cleanup under Superfund.

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12 Following the district court's recent ruling in a lawsuit against the Department brought by the Legal Environmental Assistance Foundation and NRDC, DOE has been forced to conclude that henceforth, its hazardous wastes must be managed according to RCRA standards. Legal Environmental Assistance Foundation v. Hodel, No. 3-83-562, E.D.Tenn. (slip op., April 13, 1984). However, the Department continues to assert that it is not bound by RCRA with respect to all mixtures of hazardous and radioactive wastes.

Although Superfund provides that federal facilities shall be subject to the same standards as those that are privately owned, EPA and the Department of Justice have virtually abnegated their duty to enforce against such facilities. EPA and Justice have a long-standing policy "not to take judicial action against another federal agency over compliance problems."[13] Moreover, in a Memorandum of Understanding between the Agency and DOD, EPA has released itself from cleanup responsibilities at DOD sites, leaving remediation to DOD, the agency that created the hazardous condition in the first place.

Because these agencies have effectively renounced their authority to compel compliance, and there is no effective EPA or public oversight of federal site remediation activities, there is little, if any, incentive for the federal owners of dumpsites to begin cleanups. We believe that federal site cleanup will not proceed faster in the future unless EPA's and the public's role under Superfund is strengthened.

Amendments to Superfund specifying the procedures to be used for federal site cleanup are needed to correct these problems and to ensure that federal sites are expeditiously cleaned up. NRDC endorses the approach proposed by Senator Proxmire, which would require that EPA and the federal dumpsite

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13 Environmental Protection Agency, The Federal Facilities Compliance Program: Strategy for Resolution of Compliance Problems at Federal Facilities, at 6 (January 4, 1984). See also Letter from Robert A. McConnell, Assistant Attorney General, Office of Legislative Affairs (October 11, 1983).

owner or operator be required to promptly negotiate and finalize an agreement establishing a schedule for investigation and cleanup of the site upon notice of a release or possible release.[14] Consistent with the current intent of the Act, such agreements should require federal cleanups to meet the same standards as those conducted at privately owned sites. Public notice and comment should be provided prior to finalization of the interagency agreement. If an agreement cannot be reached within the specified time, (no more than 9 months), EPA should be required either to initiate cleanup and recover costs from the federal agency or to exercise its enforcement authorities under §§106 or 107 of Superfund. Citizens should be permitted to bring suit if EPA is not diligently prosecuting the responsible federal agency.

To make federal facilities fully accountable for their waste sites, public notice of releases and possible releases at federal facilities should be required. Moreover, to instill confidence that site problems will be independently and accurately assessed, remedial investigations and feasibility studies should be performed or overseen by EPA, rather than the federal agency responsible for the dumpsite. Superfund should also explicitly require federal ERRIS sites to be ranked for inclusion on the NPL according to a set schedule, on the same basis as those that are privately operated.

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14 Senator Proxmire introduced S.2407, a bill to assure prompt cleanup of federal facilities under Superfund, in March of this year. An identical bill, H.R.4760, has been introduced in the House by Congressman Jim Moody.

In making this last recommendation, however, we wish to emphasize our belief that federal site cleanup should be financed by the federal agencies that created the problem, not by Superfund. Unlike "orphan dumps", the federal agencies responsible for these sites are readily identifiable, have the funds necessary for site cleanup, and should be required to provide these funds out of their own budgets.

We believe that adding these provisions to Superfund would substantially improve federal agency accountability and help ensure cleanup of federal problem sites. It is time that the federal government assumed a leadership role in site cleanup by putting its own house in order.

Conclusion

We commend the Committe on its effots to renew Superfund. NRDC strongly supports reauthorization of a strengthened Superfund this year. The Act must be amended to ensure adequate cleanup resources, a rapid pace of site remediation, thorough cleanup, federal facility compliance and equitable remedies for victims. We therefore urge that a reauthorization bill be introduced and reported to the Senate as soon as possible and look forward to working with you on ensuring passage of an improved Superfund this session.

STATEMENT OF

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Mr. Chairman and members of the committee, I am Janet Hathaway, Staff Attorney with Public Citizens' Congress Watch, the legislative branch of the consumer research and advocacy organization founded by Ralph Nader in 1971. Congress Watch is grateful for the invitation to be represented today in discussions of reauthorization of the hazardous waste cleanup program ("Superfund").

Congress Watch has been working closely with an informal coalition of the major national environmental organizations, including representatives of National Audubon Society, National Wildlife Federation, Environmental Defense Fund, Clean Water Action Project and Natural Resources Defense Council, concerning reauthorizing this crucial environmental legislation. The testimony I present today represents the consensus of the coalition on the issues I will address. The particular emphasis and elaboration of our views in this testimony, however, is solely my responsibility.

Mr. Chairman, as you know, reauthorization of the Superfund this year is regarded by environmental and consumer organizations, and by citizens generally, as of paramount importance. The peril posed by abandoned hazardous waste sites is so vast that a recitation of the facts sounds like exaggeration. The Environmental Protection Agency has identified some 18,000 hazardous waste sites in the U.S. and in 1983 estimated that the final tally may exceed 22,000.[1] Less than a ninth

of known sites, only 1,934 total sites, have received complete site investigations.[2]

If no action is taken to contain, assess and clean these hazardous waste sites at a rapid pace, much of our nation's water, soil and air will be contaminated. Not may be, will be. If our water and air are laced with toxics commonly found at the sites, including heavy metals, pesticide residues, and industrial solvents, people ultimately will be exposed to dangerous levels. We are dealing in many instances with waste sites which amount to hundreds of thousands of crushed and leaking barrels of toxics in unlined pits. These dumps are tragedies waiting to happen--and in too many instances already happening. Sixty percent (526 sites) of the sites evaluated by EPA using the hazard ranking system (HRS) for placement on the National Priorities List (NPL) have ground water contamination. These sites alone threaten to expose up to 8.2 million people.[3]

The history of Superfund implementation is so notorious that I need not detail why those who care about environmental integrity are skeptical about this Administration's assurances that cleanup of hazardous wastes will receive the resources it so obviously warrants. The facts speak for themselves; only 6 sites have been finally cleaned. Thousands of known hazardous waste sites have not received comprehensive assessments, including site inspections. The pace has been hastened under the current EPA Administrator, but the history of this program has fallen far below expectations. Protection of groundwater and

public health will be jeopardized if Congress and the President defer reauthorization of Superfund until the strict press scrutiny of this election year has abated. Delays or interruptions of the program almost certainly will result from waiting to act until next year when the Superfund tax is about to expire.

A. CITIZEN PARTICIPATION PROVISIONS WILL IMPROVE THE CLEAN-UP PROCESS.

The Superfund law as enacted in 1980 virtually excludes citizens--even those directly affected by neighboring waste sites--from meaningful participation in the cleanup process. The single exception is the right of interested persons to judicial review of promulgated regulations under section 113.[4] Citizens today have no right to be informed about the hazards posed by a nearby Superfund site. They have no right to know of, to comment on, or to influence EPA's decisions about whether, when or how a cleanup should be done. Nor can they require EPA to act in accordance with statutory mandates. Although EPA in the last year has voluntarily increased community relations efforts, these still fall short of what is needed for citizens to be valuable participants cooperating in the process of cleanup. And, of course, there are no assurances that this policy will not evaporate under different administrators.

Interestingly, EPA reported that Congress, States and environmentalists agree that public information and involvement in Superfund decisions should be more effective and comprehensive

"in order to restore public confidence in the Superfund program."[5] Industry, also, apparently is concerned that corporate reputations are suffering from slow, controversial cleanups of hazardous waste sites.[6] Anywhere there is consensus on such a controversial topic as Superfund, we can be sure we've struck bedrock.

Without improved access to understandable information, opportunity to comment on and influence plans, and opportunity to instigate Agency responses where EPA is failing to perform mandatory duties, citizens will be justifiably suspicious of and resistant to governmental or corporate action to address sites. Without citizen participation and cooperation, cleanup will very likely be slower and less comprehensive. Moreover, it will almost certainly be perceived as unsatisfactory, because a cleanup alone, however technically adequate, cannot allay the reasonable fears of the local community.

a. Citizen Petition for Preliminary Assessment of Sites.

In the reauthorization bill, concerned individuals should be empowered to petition the Administrator to conduct a preliminary assessment of the dangers of an actual or threatened release of hazardous substances, pollutants or contaminants. The Administrator should be required to repond with an assessment, or an explanation why it would not be appropriate, within a year. If the assessment indicates a "significant threat to human health or the environment," the Administrator should then be mandated to

apply the hazard ranking system (HRS) to determine whether the site should be included on the National Priorities List (NPL) and thus be entitled to remedial cleanup using Superfund dollars.

This provision would mean that those who live in the future Love Canals of America will not be powerless to motivate EPA to respond to their peril. Citizens would not be forced to resort to treating government and its officials as their adversaries, as the Love Canal residents ultimately were. Such a procedure would bring a toxic waste site polluting the local wells to EPA attention without panic, media hype or dangerous delay.

b. Public Notice and Opportunity for Comment on Cleanup Plans.

Second, after a site is on the NPL, citizens should be entitled to notice about proposals for cleanup and a reasonable opportunity for comment before the Administrator or the State adopts the plan. This would allow interested individuals or community groups to analyze the proposals and to make educated recommendations. Comments may alert the State or EPA of unintended consequences of the proposal or suggest alternatives that may have been overlooked. Notice of the final remedial action plan should also be published,accompanied by an explanation of reasons for significant changes from the proposal and responses to the significant comments. By this process, public debate can be a more informed and constructive force.

c. Mandatory Toxicological Profiles of Health Effects of the Most Ubiquitous or Most Dangerous Hazardous Substances.

In order to improve our understanding of the health effects of toxics, the Agency for Toxic Substances and Disease Registry should be required to prepare toxicological profiles of the most common or most dangerous hazardous substances found at NPL facilities. At present, the ATSDR is underfunded and understaffed. The importance of expanding the scientific basis for evaluating the dangers posed by substances found at Superfund sites merits an explicit and mandatory statutory instruction to the Agency to undertake comprehensive studies of these toxics.

d. Assessment of Health Risks during Site Investigation.

EPA has identified 444 toxic pollutants at the 881 sites evaluated through the Hazard Ranking System. The Agency's Superfund Task Force reports, "Virtually all of the most commonly encountered of these are known to exhibit chronic toxicity and therefore may cause human health injuries after months or years at extremely low levels of exposure."[7] Little is known about health effects of exposure to individual hazardous substances; practically unknown is the consequence of exposure to a multiplicity of toxics. Because waste site contamination is usually from a "chemical soup" rather than a single hazardous substance, the interaction of toxics, and potentially synergistic effects, are important unresolved questions. Notably, EPA's Task Force stated, "Site specific studies are needed to quantify the hazardous substances and their volumes and concentrations to more

precisely estimate the risks at each site and to determine the remedial actions needed to reduce those risks."[8] It is a significant omission in the current Superfund statute not to require the Administrator, when investigating and planning responses, to assess the risk to human health associated with the release or threatened release. We urge the Senate to correct this oversight to ensure that site-specific health effects are investigated throughout the stages of cleanup at all Superfund sites.

e. Citizen Petitions to Compel Emergency Response.

Under section 104 of the current Superfund law, the President is authorized to take necessary actions where there is a release or a substantial threat of release of any hazardous substance, pollutant or contaminant "which may present an imminent and substantial danger to the public health or welfare." The authorization is of broad scope, and includes the power to undertake "investigations, monitoring, surveys, [and] testing . . to identify the existence [illegible]xtent of the release . . . and the extent of danger to the public health or welfare or the environment." Despite this broad governmental authority to undertake emergency responses including health and environmental monitoring, citizens are at present powerless to compel the federal government to act, regardless of the extent of the release or the danger posed.

Where citizens petitioning the federal government can provide evidence from which the Administrator finds exposure

presenting a "significant risk to human health," federal emergency response should be not merely permissive but mandatory. The emergency response should include, at a minimum, identification of the nature and degree of human exposure, the current and likely future human health effects of such exposure, the source of the contamination and measures necessary to stop (or reduce to safe levels) further human exposure.

The federal response to dangerous contamination should include human and environmental exposure monitoring and health evaluations of the exposed population. We believe the reauthorization bill should ensure medical evaluations of the exposed community.

Actions needed to mitigate or cease future exposure will vary depending on the nature and the source of the contamination, but may include provision of water filtration systems or alternative drinking water supplies, isolation or containment of contaminated soil, or relocation of the exposed population. It is an appropriate use of the Superfund to finance these costs. Medical and scientific information developed in the course of the response should be readily and rapidly available to the public, with appropriate limits on uses of an individual's medical records to ensure personal privacy.

To trigger emergency federal response, it should be sufficient for citizens to show that human exposure exceeds any currently effective human exposure limit set by any federal

regulation or statute. Where federal exposure limits do not exist for the hazardous substance in question, it should suffice if citizens present evidence of the danger posed by the exposure, including, but not limited to, toxic substance documents developed in federal rulemaking proceedings, proposed (but not yet finalized) federal regulations limiting human exposure, state exposure limits, or toxicological studies.

Without the petition mechanism we are advocating citizens have no assurance that dangerous exposure will be minimized, nor can they expect systematic information-gathering concerning the exposures that do occur. Responses to releases will continue haphazardly, depending more on the how vocal and militant the local residents are than on the risk posed by the toxic substances. And the responses will, unfortunately, be based on rough estimates of health effects. Reliable data will be amassed only through making health effects studies a routine aspect of the response to hazardous substance exposures.

f. Citizen Suits to Enforce the Superfund Act.

Laws are no better than the mechanisms devised to ensure their implementation and enforcement. In the absence of the powerful threat of citizen enforcement suits, the first years of the Superfund program were scandalously misdirected. Citizen suit provisions, occurring in many environmental laws,[9] allow watchful individuals to rein in administrators who depart from the statutory mandate provided by Congress.

The reauthorization bill should permit enforcement suits by

citizens against any person (including the United States, hazardous substance generators and transportors, and owners or operators of facilities) responsible for hazardous wastes presenting an imminent and substantial endangerment to health or the environment. Citizens should also be permitted to sue the Administrator for failure to perform nondiscretionary acts or duties. These provisions are needed to ensure that cleanups are performed adequately and according to schedule, and that citizens are not left powerless while "sweetheart deals" or other administrative wrongdoing endangers the integrity of the program.

g. Waste Site Community Technical Assistance Grants.

Another important means of enhancing the quality of public participation is to provide EPA with authority to make grants available to communities likely to be affected by a hazardous waste site. The purpose of the grants would be to permit such communities to obtain expert assistance in reviewing and evaluating data prepared by the EPA or responsible parties concerning both the hazard posed and proposed remedial measures. We are told by representatives of communities near waste sites that they do not have the means to hire hydrologists, toxicologists and other appropriate experts. Without such assistance they are unable to decipher or constructively comment on EPA plans. At the Stringfellow Acid Pits, near Riverside, California, such assistance was made available to the community. At Stringfellow, it is believed that technical assistance funding

will be invaluable in increasing understanding and constructive communication. Funding for technical assistance to communities will almost certainly help to defuse an otherwise highly volatile and distrustful relationship between citizens, local government, EPA and responsible parties. For the Stringfellow example to be pursued in other parts of the country, explicit authority to use the Superfund for these grants is needed.

B. HAZARDOUS SUBSTANCE CLEANUP IS A PARTIAL RESPONSE--AID TO THOSE INJURED BY TOXIC EXPOSURE IS NEEDED.

Currently the Superfund provides no remedy for health care costs from injuries, diseases or deaths associated with exposure to hazardous substances. Congress evaded the controversial issue of victims' compensation in 1980, and mandated a study of the adequacy of existing remedies and recommendations for needed revisions of law.

The study, referred to as the 301(e) report, was published in September 1982. It concluded, "Available remedies are inadequate in view of the substantial number of claims that may arise, and the factual and legal complexities that will be involved in their litigation."[10] The study proposed a two-tiered system, consisting of an administrative system (geared toward providing swift but limited compensation for claims small enough to make court remedies inappropriate) and state court actions, modified to ease barriers victims currently face.

In 1980, the Surgeon General together with the Congressional Research Service (CRS), reported to the Senate Committee on

Environment and Public Works, "The scope of the health problem that could derive from chemical waste dumps cannot be precisely estimated at present. The problem could be enormous."[11] The report reviews selected incidents of human exposure to toxic substances such as polybrominated biphenyls (PBB's), mercury, hexachlorophene, polychlorinated biphenyls (PCB's), carbon tetrachloride, trichloroethylene, benzene, and pesticide waste. Even this preliminary review indicated that significant health effects have been reported in these incidents, ranging from headaches, respiratory problems and nausea to paralysis, cancer and death.[12]

More recently, statistically significant increases in leukemia and certain birth defects have been found among residents of Woburn, Massachusetts who drank contaminated well water.[13] While we cannot claim to know the precise number of injuries from hazardous substances, we do know that they are occurring.

Furthermore, we know that existing mechanisms for compensation, such as workers compensation and the tort system, are not successful in aiding toxic substance victims. A 1980 CRS report concluded, "In light of the information contained in this report, it would be difficult to dispute the widely held view that existing state law is not an efficient, effective or even predictable mechanism for recovering compensation for toxic substance pollution."[14] The 301(e) study and subsequent law review articles have reiterated this point.[15]

We regard the proposed provisions to assist and compensate victims as long overdue. The Superfund reauthorization should include measures to help reduce the number of victims of toxic exposure, including, as I mentioned earlier, methods for citizens to require a site to be listed on the NPL if it ranks high enough when evaluated according to the hazard ranking system, and provisions to allow citizens to compel the agency to take emergency action when dangerous human exposures occur. Cleaning sites properly and swiftly will in itself mitigate the problem of disease, injury and death associated with toxic exposure. The problem will not be solved by cleaning sites alone. There are people, some of whom testified before you earlier this spring, for whom prospective measures aimed at prevention are too late. Some of these victims are already injured or ill; some have died. Many others are exposed or will be exposed to waste site poisons as the glacial process of site evaluation, proposals, and cleanup goes on.

In addition to reauthorizing a larger, swifter and more accountable Superfund program, victims need the Congress to address their plight. There are two equally significant remedies required by persons with injuries, disabilities or diseases from toxic substances. People need access to the Superfund, or some other trust fund financed by a Superfund-like tax on the producers of toxic materials to help them bear their numerous out-of-pocket expenses. Included among these costs to be reimbursed through the fund should be medical care (both diagnosis and treatment),

lost wages, relocation or alternative drinking water, and fees for representatives or witnesses to aid them through the process. In addition to a method to aid victims in providing for their basic needs without destroying their hopes of a decent future, provisions should be included in the reauthorization bill to improve the procedures for those victims who are willing and able to sue individual parties responsible for their exposure.

The most comprehensive and swiftest method of reforming the judicial system to make it more fair for the toxic tort plaintiff is by establishing a federal cause of action which would be non-preemptive of other state or federal tort remedies but which would allow a person in any state to avail themselves of certain procedures which take into account the extraordinary burdens on a plaintiff in these suits.

I will elaborate our views on both the "administrative" assistance and judicial reform to assist victims of toxic exposure. Finally, I will discuss the reasons why our support for establishing these two systems is contingent upon a clear understanding that either or both remedy be available to any injured individual. Because the purpose and the scope of these two proposals differ greatly, it would be grossly unfair to preclude a victim from suing a responsible party for loss of future employment potential simply because the Superfund had helped cover medical expenses.

a. Superfund Coverage of Unreimbursed Medical Expenses, Lost Wages and Relocation Costs of Toxic Victims.

Because of high transaction costs and substantial delays, even victims clearly meriting reimbursement are often unwilling or unable to pursue recovery through the courts. We believe some portion of the Superfund should be used to reimburse certain victims for actual, unreimbursed costs attributable to the toxic substances from a waste site. We believe such assistance will sustain some victims lacking other means of support, and will appropriately shift the costs of exposure from the victims to the industry making and disposing of these dangerous substances.

The original bill introduced by Rep. James Florio (DNJ), H.R. 4813, included provisions to enable Superfund to be used to reimburse certain costs. We applaud the concept behind these provisions but regarded the remedy as only barely meeting the most immediate needs of certain victims. We regard this proposal as extremely strict, notwithstanding the claims of industry lobbyists. The remedy envisioned by the drafters of H.R. 4813 is the absolute minimum for meeting the most immediate needs of certain victims. We urge you to consider modifications of this proposal to reduce the onus placed on victims seeking relief.

1. Limitation to toxic exposure from facilities or sites.

H.R. 4813 provided relief for certain toxic substance victims or their dependents who can show death, physical injury or illness caused by exposure to hazardous substances from a

facility or site.[16] We believe that this requirement of showing that the hazardous substance is from a facility or site will make recovery unlikely or impossible for a significant number of victims. A claimant would have to establish, for example, not merely that there was benzene in the drinking water supply but that the benzene originated at a facility.[17] To accomplish such a showing, a claimant would ordinarily need more than circumstantial evidence that barrels of benzene have leaked at a local site. A claimant will frequently need sophisticated hydrological evidence to establish that benzene originating from the leaking barrels migrated through the soil to the contaminated well or aquifer. This is both difficult and expensive to do. Many persons actually injured from waste site pollutants will be unable to overcome this preliminary hurdle.

2. Causal nexus must be shown.

Additionally, recovery under H.R. 4813, Part 1, Subtitle J, is available only to those who can show a "physical injury, illness or death" and that the manner of exposure has a "reasonable likelihood of causing or significantly contributing to death, or to a injury or illness of the type suffered by applicant." Because the likely health effects of human exposure to most hazardous substances remain largely unknown,[18] it will be a rare victim who will be able to establish such an association between the exposure and subsequent injury. Nevertheless, we agree that some proof of causation should be required for recovery. To mitigate the plaintiff's burden, we believe that

the Senate version of the Superfund reauthorization should include the "rebuttable presumption" of causation which is discussed infra at page 26.

3. Compensation should be permitted for all adverse health effects, whether physical, neurological or sensory.

We believe that all injuries associated with hazardous substances--whether manifestated as physical, behavioral, sensory or intellectual disorders--should be grounds for an applicant's recovery for medical expenses and wage losses. Under the Florio bill only expenses associated with "physical injury, illness or death" would be compensable. The definition of "physical injury or illness" at section 1101(a)(3)-- "any serious bodily injury or any other internal or external injury, including impairment of health which is caused by exposure to a hazardous substance prior to birth"--is troublingly narrow. Among the reported health effects of toxic exposure are conditions which are not easily categorized as physical injury: e.g., nausea, insomnia, behavioral disturbances, vertigo or loss of intellectual capacity. Certainly those out of work or needing medical treatment for these health problems are no less deserving of reimbursement than are those with rashes, kidney malfunction or cancer.

4. Wage loss reimbursement should not be limited in duration.

The wage loss relief available to successful applicants under H.R. 4813 is very narrow. Claimants are limited to no more

than $2000 per month in lost wages for no more than 5 years after the injury--regardless of the actual amount of wages lost or the duration of the unemployment. Whether the duration of unemployment is several months or many years, it seems more appropriate for this cost to be borne by the Superfund feedstock manufacturers than by those unfortunate individuals who happened to drink water contaminated by those manufacturers' products.

We believe that the full period of wage loss caused by toxic exposure should be recoverable. The Senate reauthorization bill should ensure that the burdens of extended toxics-induced disability be borne by industry and not by victims.

5. Many actual expenses will not be recoverable.

The only expenses other than lost wages and medical expenses which we believe should be reimbursed through the Superfund are reimbursement of the reasonable costs of burial, alternative drinking water supplies or relocation of residence, when these expenses result from exposure or threatened exposure. Other major costs, such as diminution of the value of property or loss of profits from a business, would not be covered by the fund. We believe that loss of property value is capable of fair adjudication in courts, and such suits do not raise the difficult causation questions involved in toxics torts claims. Difficult to estimate damages such as loss of fertility or loss of intelligence would also not be compensable by the Superfund. We believe that the evaluation of such losses are peculiarly within the expertise of courts.

Clearly this is a narrow, partial remedy which does not attempt to make the victims "whole". In no sense is this limited recovery to be regarded as a substitute for tort remedies. The Superfund reauthorization should not require a sacrifice or compromise of common law remedies for the right to pursue such limited reimbursement from the Superfund.

6. Admissible evidence.

An extremely valuable provision in a reauthorization bill would explicitly establish as relevant to the issue of causation any information which tends to establish that exposure to the hazardous substance in question causes or contributes to death, or to personal injury or illness of the type suffered by an individual. Anachronistic disputes over the relevancy and reliability of evidence such as epidemiological and animal studies should not continue. The weight to be accorded such evidence should not be dictated, and would of course vary depending on such factors as the design of the study, peer review and independent verification of the results. However, applicants are being unfairly disadvantaged where they are refused a chance to present such evidence.

7. Statute of limitations.

Finally, applicants should be given at least a three year period to file for recovery. The limitations period should begin on the later of (1) the date at which the applicant knew (or reasonably should have known) of the physical injury or illness,

or the date of the individual's death; (2) the date at which applicant knew (or reasonably should have known) that physical injury, illness, death or other expense was caused or contributed to by hazardous substance exposure; or (3) the date of enactment. This is a significant advance over proposals which would not compensate for damages occurring before enactment of the statute. Because today there are victims of toxics who are without adequate means or appropriate remedies, no purported solution which would aid only future victims would be acceptable.

8. No duplicative recovery is allowed.

It is appropriate, we believe, to ensure that victims will not be entitled to duplicative recovery. The reimbursement award from the Superfund should be reduced by the total of compensation received from any other source, governmental or private. The United States should have a lien upon any sums subsequently recovered for the same damages. We believe this limitation is a necessary one, because we believe the Superfund should be used as a remedy of last resort. The Superfund should not be drained where responsible parties have been identified and found liable. Furthermore, such a restriction ensures that Superfund emergency relief will be available only to those who have fallen through the cracks in other compensation and insurance programs,[19] and will therefore go to those in greatest need.

b. Victims' Rights to Sue Those Responsible for Injuries Resulting from Hazardous Substances.

One of the greatest inequities facing toxic substance injury

victims is the great variability of state law and procedure determining their chances of success in the courts. Victims who happen to reside or be injured in Texas or New Jersey stand far greater chances of recovering against those responsible for their toxic exposure than someone with a substantively identical suit from South Dakota or Ohio. A right to sue under federal law, in cases brought either in state or federal court, would remove this inequity.

A federal cause of action should not preempt or otherwise disrupt state remedies. We think a federal right to sue greatly enhances access to the courts for those injured from hazardous substances released from facilities or during transportation if it incorporates certain procedural improvements tailored to the special difficulties of toxic tort suits.

1. Statutes of limitations.

There are many respects in which toxic tort suits differ from the traditional traumatic injury tort suits, and the differences are ones which disfavor the toxic tort victim. The long latency period of cancers and other toxic-induced diseases increases the difficulty of amassing evidence on the nature and extent of the exposure, the identity and behavior of responsible parties and the causal nexus between exposure and injury. Medical science does not yet provide us with a clear understanding of the role between exposure to certain substances and health effects. Laws obviously cannot change a disease latency period or the state of scientific certainty, but they can

recognize these peculiarities of toxic torts in fashioning an appropriate remedy. To do this, the Superfund reauthorization bill must establish a fair, nationally uniform statute of limitations.

A statute of limitations for the pursuit of a remedy is intended to prevent dilatory behavior or unfair surprise by the plaintiff. But in some states, toxic tort plaintiffs are being forced to file suit soon after exposure, bringing claims for acute effects and "reasonable fear of cancer." If they wait until toxic-induced cancer is in fact diagnosed, their right to sue will have expired. The 301(e) study has illuminated this pernicious problem[21] and recommended reform. While only a handful of states have the worst kind of statute of limitations for persons with long latency health effects[22]--one beginning at the time of exposure--only thirteen jurisdictions have the most appropriate limitations period, beginning when a plaintiff knew or should have known both that he or she has been injured and has a cause of action.[23] In the majority of states, a plaintiffs' right to sue may have elapsed before he or she could or should have known that a remedy was available. Such a discovery rule should be incorporated in the federal cause of action.

2. Relevant Evidence.

The federal suit provision should help alleviate confusion and variability as to the admissibility of evidence which will be needed to make the plaintiff's case. Anachronistic state court

hearsay, reliability and relevancy rulings are keeping essential evidence from being presented to the jury. Courts in some states rule against admitting scientific evidence derived from studying groups other than the parties before the court. Such often-excluded evidence includes epidemiological studies, animal studies, toxciological studies, tissue cultures, and immunological studies.

Although when the action is pursued in the federal courts, the Federal Rules of Evidence may allow much of this information under its definition of "relevant evidence" (Rule 401)[24] and exceptions to the hearsay rule (Rule 803, especially exceptions (4),(8),(18) and (24)),[25] it is unnecessarily disadvantageous to plaintiffs not to make explicit in the reauthorization bill the admissibility of such evidence.

We believe that the courts should be instructed to admit all evidence tending to make more or less probable the causal association between the exposure to the hazardous substance in question and the injury or damages. This is in keeping with the definition of "relevant evidence" in Rule 401 of the Federal Rules of Evidence, and is necessary to avoid unpredictable and unfair evidentiary rulings.

3. Compensable Damages.

It should be made clear that compensable damages under a federal cause of action are not solely limited to physical effects. Clarification is needed to ensure that the federal cause of action will not be read as precluding recovery for any

physical, sensory, neurological,emotional or intellectual impairment traceable to hazardous substance exposure. Loss of intelligence from lead poisoning is not an insignificant injury, and where liability of a responsible party can be established, such an injury should be compensable in a tort suit.

The availability of punitive damages should also be explicitly provided in the federal cause of action. Where the injury occurs because of willful, intentional or reckless wrongdoing on the part of responsible parties, we believe that the threat of punitive damages can substantially deter future egregious corporate misconduct. Without the possibility of liability for the full costs of exposure, plus punitives, businesses involved in the production, transportation or disposal of hazardous substances cannot be expected to use utmost vigilance in protecting all citizens from the peril of exposure to hazardous substances.

4. Class Action Certification.

Much comment has centered on the cost of litigating toxic tort actions.[26] Novel kinds of actions or untested theories of liability are almost invariably more costly, and we can expect the costs to decline over time. Unfortunately, it is still true as the 301(e) group reported in 1982, "[A] denial of plaintiff combinations in the bringing of such suits in effect denies a plaintiff the opportunity to bring the action at all, unless his claim is exceptionally large.[27]

To keep costs of suits at levels which will not preclude virtually all deserving plaintiffs from pursuing their tort remedies, class action certification should be granted where there are numerous plaintiffs with substantially similar issues of fact or law. Even where damages vary widely, class certification for purposes of liability issues would substantially reduce costs without sacrificing fairness.

The prerequisites of class action certification established by Rule 23(a) of the Federal Rules of Civil Procedure can be met in many cases involving mass exposure to hazardous substances. However, the Advisory Committee Note to the 1966 Revision of Rule 23(b)(3) (39 F.R.D. 69, 103) states:

> A 'mass accident' resulting in injuries to numerous persons is ordinarily not appropriate for a class action because of the likelihood that significant questions, not only of damages but of liability and defenses to liability, would be present, affecting individuals in different ways. In these circumstances an action conducted nominally as a class action would degenerate in practice into multiple lawsuits separately tried...."

Although the comment plainly does not bar mass tort class actions, many courts have relied on it to deny plaintiffs' motions for class certification in mass tort or personal injury actions, especially those alleging negligence by one or more defendants over some period of time.[28]

The permissibility of using class actions in tort cases where the prerequisites of Rule 23(a) are met needs to be clarified. The Superfund reauthorization presents an ideal opportunity to facilitate the use of class actions in toxic tort

suits where there are numerous plaintiffs with substantial similarities in the factual circumstances or their liability theories in toxic tort cases.

5. The Plaintiff's Proof of Causation

The causation issue is acknowledged to be extremely burdensome for a toxic tort plaintiff, both because of the paucity of medical and scientific information about certain toxics and because many diseases associated with toxics exposures occur, although with a lower rate of incidence, among unexposed populations.

We believe that explicit instructions about the plaintiff's burden of proof on the issue of causation in both the administrative and judicial systems is necessary to ensure that plaintiffs will not have their case prematurely dismissed simply because evidence establishing that exposure was a "but-for" cause of the injury may not yet be available for certain toxic substances at any price.

The 301 (e) study group advocated such a mechanism to ease the plaintiff's burden of proof in the administrative compensation system.[29] The plaintiff should be regarded as having made the showing needed to survive a motion to dismiss or a directed verdict on the issue of causation if he or she can show the following:

1) that the plaintiff was exposed to hazardous substances from a waste site or facility in some manner; and

2) that the plaintiff suffered death or the kind of injury, illness or disability of a type which can be caused or contributed to by an exposure to such hazardous substances.

Upon such a showing, the plaintiff would be regarded as having made a sufficient showing that the plaintiff's death or injury was caused by exposure to the hazardous substance to get before the jury or fact-finder. The plaintiff would not, of course, be guaranteed success before the jury or judge in the final analysis. The fact-finder would weigh the sufficiency of the evidence presented by the plaintiff as compared to rebuttal evidence provided by the defendant.

The 301 (e) study group called this instruction about the level of proof required on the causation issue a "rebuttal presumption." Many journalists and lobbyists misconstrue such a suggestion as guarenteeing recovery for every plaintiff who can make this showing. This is clearly not desirable, and is not what we have contemplated. The term "presumption" misleads people, perhaps. Upon making the required showing, the plaintiff is presumed only to be entitled to a complete hearing on the issue of causation. The verdict will be based on the totality of the testimony including evidence about the degree and duration of the waste-site exposure and the plaintiff's other exposures to carcinogens, presented by both the defendants and the plaintiff.

6. Non-exclusivity of Judicial and Administrative Remedies.

In conclusion, let me reiterate our support for the alternative and non-exclusive remedies, from the Superfund and

through the courts, for persons harmed by hazardous substance exposure. The coalition adamantly opposes proposals which would require an election between the administrative and judicial remedies--either or both should be available to the claimant who can meet the standards of proof. However, we agree double recovery should not be permitted.

The remedies will not be equally useful or available to all victims. The administrative system will not serve to make the claimant "whole," as the court remedy is intended to do. Rather, it merely helps to sustain the claimant at a decent, though minimal level. As I mentioned earlier, many real costs, such as property devaluation or pain and suffering, would not be compensable through the fund. However, it will often be true that claimants will not have the resources--evidence, money or time--to enter the judicial process. The cost of toxicological and hydrogeological studies, and other expert testimony needed to succeed in the courts sometimes exceeds one hundred thousand dollars. Identifying a solvent responsible party may often be impossible. Probably it will be the exceptional victim or exposed community who can find relief in the courts, but that remedy is nonetheless essential to ensure that the victim who has suffered enormous losses and who can surmount the evidentiary hurdles will be compensated. Only the judicial remedy would permit recovery of the full range of damages resulting from hazardous substance exposure.

We wish to commend you, Mr. Chairman, for holding hearings

on this vital matter. We hope to work closely with you and your staff to ensure passage of a strengthened Superfund reauthorization this year.

APPENDIX

Table A
The Extent of Observed Uncontrolled Releases
From the 881 Sites Evaluated through the Hazard Ranking System

	Releases Observed		Population
	Number of Sites	Percent of Total	Potentially Exposed
Air	133	15%	1.2 million within 4 miles
Surface Water	450	51%	6.5 million
Ground Water	526	60%	8.2 million

More sites threaten ground water than any other media. Figure 3 presents the uses of the ground water which are currently contaminated or at risk of contamination from hazardous waste sites.
Source: EPA Memorandum, op. cit., December 8, 1983, page 7.

Table B
Ten Most Frequently Reported Chemicals
At 881 Sites Evaluated through the HRS

Rank	Chemical Identified	No. of Sites	Toxic Effects		
			Carcinogen	Mutagen	Teratogen
(1)	Lead	241			+
(2)	Trichloroethylene	235	+	+	
(3)	Toluene	234		+	
(4)	Benzene	196	+	+	+
(5)	PCB's	175	+		+
(6)	Chloroform	129	+		+
(7)	Phenol	125			
(8)	Arsenic	124	+	+	+
(9)	Cadmium	121	+		+
(10)	Chromium	119	+	+	+

Source: EPA Memorandum, op.cit., December 8, 1983, page 8.

ENDNOTES

[1] EPA memorandum, "Superfund Task Force Preliminary Assessment," from Mr. Alvin R. Morris, Director, Superfund Task Force, to Alvin L. Alm, Deputy Administrator and Lee M. Thomas, Assistant Administrator for Solid Waste and Emergency Response, U.S. Environmental Protection Agency, p. 2, Dec. 8, 1983.

[2] Ibid., p. 5.

[3] Ibid., p. 7.

[4] 42 U.S.C. 9613, Dec. 11, 1980.

[5] EPA Memorandum, op. cit., Dec. 8, 1983, p. 22.

[6] Ibid., p. 20. See also, "Seeking Ways to Speed the Cleanup," Chemical Week, p. 32, January 18,1984. The former chairman of the Chemical Manufacturer's Association William G. Simeral, called the dump site problem "the single most obvious symbol of everything the public believes to be wrong with the industry."

[7] EPA Memo, op. cit., p. 8.

[8] Ibid., p. 9.

[9] The Clean Air Act, (CAA, section 304), Federal Water Pollution Control Act (FWPCA, section 505); Toxic Substances Control Act (TSCA, section 20); and Resource Conservation and Recovery Act (RCRA, section 7004).

[10] Injuries and Damages from Hazardous Wastes--Analysis and Improvement of Legal Remedies. Report to Congress in Compliance with Section 301(e) of the Comprehensive Environmental Response, Compensation & Liability Act of 1980 (P.L. 96-510), Senate Committee on Environment and Public Works, Sept. 1982, Part I, p. 193.

[11] Health Effects of Toxic Pollution: A Report from the Surgeon General, Reports prepared by th Surgeon General, Department of Health and Human Services and the Congressional Research Service, for the Committee on Environment and Public Works, U.S. Senate, August 1980, p. 22.

[12] Ibid., pages 153-312.

[13] Lagakos, Wessen and Zelen, Harvard School of Public Health, The Woburn Health Study, 1984.

[14] Six Case Studies of Compensation for Toxic Substances Pollution. A report prepared under the supervision of the Congressional Research Service by Environmental Law Institute, for the Committee on Environment and Public Works, U.S. Senate, June 1980, pages 520-1.

[15] Jeffrey Trauberman, "Statutory Reform of 'Toxic Torts'," exerpted at 7 Harvard Environmental Law Review 177 (1983); James R. Zazzali and Frank Grad, "Hazardous Wastes: New Rights and Remedies," 13 Seton Hall Law Review 446 (1983); Comment, "Establishing Liability for the Damages from Hazardous Wastes: An Alternative Route for Love Canal Plaintiffs," 31 Catholic University Law Review 273 (1982).

[16] H.R. 4813, section 1112(a)

[17] "Facility" is defined at section 9001(7) to include buildings, pits, landfills, storage containers or sites where a hazardous substance has been deposited, but to exclude any consumer products in consumer use or any vessel.

[18] Office of Technology Assessment, Assessment of Technologies for Determining Cancer Risks from the Environment, June 1981, p. 108. "The carcinogenic potential of the myriad chemicals in these [hazardous waste] dumps is unknown at present."

[19] The Health Insurance Association of America states that at the end of 1981, 188 million persons, 84% of the civilian noninstitutional population were protected by one or more form of private health insurance. Some 158 million persons, and 90% employees studied in 1980, had major medical expense policies. At the same time, 80% of the civilian labor force had some form of disability income coverage. Sourcebook of Health Insurance Data, 1982-3, Health Insurance Association of America, pages 7-11.

[21] Injuries and Damages from Hazardous Wastes (September 1982), op. cit., Part 1, pp. 28-30, and Part 2 (Appendices), pp. 13-79.

[22] As of late 1982, eight jurisdictions--two by statute and two by judicial determination--have such rules. They are Idaho and Virginia (by statute), and Alabama, New York, Ohio, South Dakota, Wisconsin and the Virgin Islands. See Ibid.

[23] This form of the "discovery rule" is in effect in Arizona, Colorado, Florida, Hawaii, Puerto Rico, Louisiana, Michigan, Montana, New Jersey, South Carolina, Texas, West Virginia, and Wyoming.

[24] Federal Rules of Evidence, Rule 401: "Relevant evidence" means evidence having any tendency to make the existence of any fact that is of consequence to the determination of the action more probable or less probable than it would be without the evidence.

[25] Exception 803(4) covers statements for purposes of medical diagnosis or treatment; (8) concerns public records and reports; (18) involves information published in reliable treatises, periodicals or pamphlets; and (24) involves other circumstantial guarantees of trustworthiness.

[26] See Kakalik, et. al., Costs of Asbestos Litigation, the Rand Corporation Institute for Civil Justice, 1983; Trauberman, Statutory Reform of "Toxic Torts," Environmental Law Institute, 1983, p. 29-30; and 301(e) study, op. cit., Part 1, pp. 67-8.

[27] Injuries and Damages from Hazardous Wastes, op. cit., Part 1, page 257.

[28] See In re Dalkon Shield Cases 693 F.2d 847, 852 (9th cir., 1982); Yandle v. PGG Industries, Inc., 65 F.R.D. 566, 569 (E.D.Tex. 1974) (Asbestosis); Ryan v. Eli Lilly & Co., 84 F.R.D. 230 (D.S.C. 1979) (DES action); Mink v. University of Chicago, 460 F.Supp. 713 (N.D. Ill. 1979) (DES); Harrigan v. United States, 63 F.R.D. 402 (E.D.Penn. 1974) (negligent surgery); Snyder v. Hooker Chemicals and Plastics Corp., 104 Misc. 2d 735, 429 N.Y.S.2d 153 (1980) (Love Canal toxic waste action); Rosenfeld v. A.H. Robins Co., 63 A.D.2d 11, 407 N.Y.S.2d 196 (1978) (Dalkon Shield); Hobbs v. Northeast Airlines, Inc., 50 F.R.D. 76 (E.D.Penn. 1970) (airplane crash); Marchesi v. Eastern Airlines, Inc., 68 F.R.D. 500, 501 (E.D.N.Y. 1975) (airplane crash); In re Federal Skywalk cases, 680 P.2d 1175 (8th Cir. 1982); In re Dalkon Shield Products Liability Litigation, 693 F.2d 847 (9th Cir. 1982), cert. denied 51 U.S.L.W. 3552 (1/27/83).

[29] Injuries and Damages from Hazardous Wastes (September 1982), op. cit., Part 1, pages 196-210; Part 2, pages 312-340. The 301 (e) study group stated that the presumption in tort actions should be "left to the development of the law in the several states." Ibid, Part 1, page 260.

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June 1, 1984

Senator George Mitchell
Committee on Environment and Public Works
Senate Dirksen Office Building
SD-416
Washington, D.C. 20510

Dear Senator Mitchell and Members of the Committee:

In response to Senator Mitchell's question at the May 16th hearing, I would like to provide Congress Watch's response to Mr. William Ruckelhaus' testimony concerning the pace of the Superfund toxic waste cleanup program.

Mr. Ruckelshaus stated:

> "We are currently expending our response activities to the limits of our capability to manage the problem. In the absence of a clearer understanding of the extent of the problem and the needed size of the Fund, additional infusions of money or attempts to further accelerate the program could have the paradoxical effect of retarding our activities, not speeding them up."

(Statement of William D. Ruckelshaus, Administrator, U.S. Environmental Protection Agency, before the Subcommittee on Commerce, Transportation and Tourism, Committee on Energy and Commerce, U.S. House of Representatives, March 15, 1984.)

Congress Watch finds these remarks paradoxical indeed. His further statements do not support the conclusion that more money or mandatory schedules would retard EPA's Superfund activities. Rather, his comments indicate the need for an expansion of the Superfund by legislative activity as soon as possible in order to give the clearest possible advance notice to industry, to the states, to potentially responsible parties and to contractors providing support work that Superfund work will be increasing substantially for years to come.

Mr. Ruckelshaus states that there is a limit to the possible acceleration of remedial investigation/feasibility studies (RI/FS), because certain essential field activities are time-consuming and subject to delay by bad weather. There are indisputably some practical limits to the pace of RI/FS completion. Nevertheless, there is no reason to infer from the existence of limits that the Superfund program cannot speed the RI/FS process and the cleanup of sites. Mr. Ruckelshaus provides no evidence that Superfund is moving as quickly as is practically possible.

The expansion of the Superfund program will require EPA's hiring and training more staff. Mr. Ruckelshaus concedes that increasing personnel is possible, but he cautions that in some instances this process may take a year or more. Rather than explaining why "attempts to further accelerate" Superfund could have the "paradoxical effect of retarding" cleanup, these remarks imply that successful attempts at speeding the program will require months of advance notice to the Agency from Congress. With the certainty provided by mandatory schedules explicitly spelled out in the reauthorizing statute, the Agency can seek and secure appropriate personnel and train them in a rapid but orderly manner.

Mr. Ruckelshaus also states that the analytical laboratory industry is "currently operating near capacity." Assuming this is correct (although it is contrary to comments I have heard from private technical consultants), it does not warrant despair that the Superfund program cannot be expedited. Private industry is not in the habit of refusing expansion in the face of lucrative long-term increases in demand for the industry's services. We cannot say with certainty the precise length of time during which increased capacity in analytical laboratories evaluating samples from waste sites will be required. We do know that such work must necessarily be heightened for a number of years. Even on the conservative assumption that the National Priorities List (NPL) of Superfund sites will not exceed 2200 sites, and assuming that EPA has 130 sites under investigation using the support work of these analytical laboratories each year (which Mr. Lee Thomas, the Assistant Administrator for Solid Waste and Emergency Response, has stated is the maximum EPA can now effectively manage, given the laboratory capacity problem), labs would be able to count on nearly 17 years of steady demand for their work, even if each investigation could be completed in one year's time. The period of steady demand would be still larger if the laboratory work associated with Preliminary Assessments of the thousands of sites on the ERRIS (Emergency and Remedial Response Information System) list but not on the NPL is taken into account.

It seems from these facts that analytical laboratory work will be in high demand for many years to come, and will continue to be instigated by a variety of environmental regulatory programs in addition to Superfund. There is no reason to doubt that in a few years such laboratories could substantially expand capacity to meet demand. The increase in laboratory capacity will only be facilitated by explicit statutory directives issued well in advance of the time for dramatic expansion. Once again, Mr. Ruckelshaus' arguments lead me to conclude that rapid action on the Superfund reauthorization together with statutory language clearly establishing a faster remedial action schedule for waste sites will be essential to an orderly expansion of the program.

A gradual acceleration, not chaos, would be the likely result of greater infusions of money and explicit mandatory schedules.

I will be happy to further explain Congress Watch's views, at your convenience.

Sincerely,

Janet S. Hathaway

Janet S. Hathaway
Staff Attorney, Congress Watch

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

WEDNESDAY, MAY 23, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room SD-406, Dirksen Senate Office Building, Senator Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Symms, Evans, Randolph, Burdick, Mitchell, and Lautenberg.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. The Committee on Environment and Public Works will please come to order.

Good morning and welcome to this morning's hearing which will deal with the proposed extension of Superfund.

Since we have a fairly full schedule this morning, to put it mildly, we are going to ask our first witnesses to discuss the activities with the Department of Defense under the Superfund Program, and our second panel, the relative merits of supporting the Superfund program through "waste end" taxes as opposed to the current system of taxing feedstocks.

Following these two panels we will hear from a series of witnesses who have requested the opportunity to testify. As I have said, with a very full program and a very lengthy list, we are asking each of the witnesses to limit his or her testimony to 5 minutes.

The full statements of all witnesses will appear in the record.

Tomorrow the committee will conduct another in this series of hearings on the Superfund extension. It is our hope, when the committee next convenes after May 24, it will be for the purpose of reviewing a specific legislative proposal. I will say again that it is my desire, hope, and intention to complete committee work by the end of June so that we are free to schedule floor consideration between the two national conventions.

Senator Mitchell, do you have any opening statement?

Senator MITCHELL. No, thank you, Mr. Chairman.

Senator STAFFORD. All right, we will get right to witnesses, then. The first panel will consist of Dr. Lawrence Korb, Assistant Secretary of Defense for Manpower, Reserve Affairs, and Logistics, DOD; Mr. Ken Kamlet, director, Pollution and Toxics Program, National Wildlife Federation, also Washington, DC, is here.

Dr. KORB. Mr. Chairman, a point of order here. I was not informed this was a panel. I don't think it is appropriate for a governmental witness to appear with somebody from a private group. If you wish to hear us consecutively, that's fine.

Senator STAFFORD. Well, we will be glad to hear you. We don't see Mr. Kamlet at the witness——

Dr. KORB. He's right there.

Senator STAFFORD. We're having to jam things up because of the lack of time. If you want to go ahead as an individual, you certainly may.

Dr. KORB. I just think that's the appropriate way in which to proceed.

Senator STAFFORD. All right. What's inappropriate about a Government official appearing with a private citizen?

Dr. KORB. Well, Government officials of the executive branch could be called upon to testify. We are responsible to the Congress for carrying out programs. When you have somebody with a panel it gives the appearance that that's a debate, or you're supposed to be dealing with other groups. I was not informed about this beforehand; I was told that I would be testifying, representing the Department. And I think it's perfectly appropriate for you to hear anybody that you like, but the idea of a panel gives the same type of status and I think we do not have the same status under the law or by custom.

Senator MITCHELL. Mr. Chairman, I have no objection. I don't agree with your analysis, but——

Dr. KORB. Well, I think there's an important principle here. We've been asked, for example, to testify on the Defense budget with the Brookings Institution, who takes a different view. I think if Congress wants to hear from the Brookings Institution, that's their prerogative; but they do not have the same status.

Senator STAFFORD. Well, in the interest of time, unless there's an objection the Chair will let Dr. Korb go ahead as an individual. And when he's completed his testimony, we will go to Mr. Kamlet.

Dr. Korb, the floor is yours.

STATEMENT OF LAWRENCE J. KORB, ASSISTANT SECRETARY OF DEFENSE FOR MANPOWER, RESERVE AFFAIRS, AND LOGISTICS, DEPARTMENT OF DEFENSE

Dr. KORB. Thank you very much, Mr. Chairman. It is a pleasure to appear before you to review the progress that the Department has made in environmental protection in the last 3 years. It is a record of which I am proud, and a program to which I am personally committed.

I would like to place the total DOD environmental program in perspective, and then focus on a new program, the Defense Environmental Restoration Program.

The Department's environmental program includes three principal areas: pollution abatement, natural resource management, and pest management. The pollution abatement area focuses on compliance with all Federal environmental laws and regulations, as well as on waste stream reduction. We spent over $1 billion on water pollution and over $400 million on air pollution.

In the area of natural resources we manage 24 million acres of land under Defense stewardship for all possible compatible uses. We request no appropriation to accomplish these goals because we finance our needs from sales of forest products. In addition, we collected $15 in cash and services from agriculture outleases, and about $1.5 million in outdoor recreation user fees.

The Pest Management Program protects DOD personnel from disease and our property from damage. We apply the best technology to monitor disease vectors which could affect DOD personnel around the world, and to protect about $350 billion worth of facilities and stored products from pest damage.

The Defense Environmental Restoration Program is a 1984 expansion of the environmental cleanup program. As you know, Congress appropriated $150 million for this program in 1984. This allowed us to add two new elements: formerly-used site cleanup, and a research and study component. The 1984 Defense Appropriations Act expedited our program and gave us the charter to conduct work on formerly used lands. We have requested a substantial increase in the President's 1985 budget for the program.

I will now review the program's four elements.

Figure 1, which you have, shows how we are spending the $150 million appropriation in 1984. The first element is the Installation Restoration Program. This is the Department's program to identify and correct problems with past improper hazardous waste disposal sites on our own bases—if you will, the DOD counterpart to the national Superfund Program. Because Federal agencies are not eligible to spend EPA Superfund dollars to correct problems on their own land, we need specific appropriations to correct our own problems. In 1984 we will be spending about $86 million at about 93 active installations. We do work closely with EPA to assure that our Installation Restoration Program is consistent with their approach. EPA is presently evaluating a number of our bases for possible inclusion on their Superfund national priorities list. Probably 40 to 50 DOD sites will eventually be placed on the national priorities list.

The Installation Restoration Program is designed to focus on the actual problem sites. We have a four-phase approach for screening our installations. Phase I is an assessment of all potential sites. It includes a detailed records search and employee interviews. In 1980 we established a goal to complete these assessments by the end of 1985. We are now over 90 percent of the way toward achieving that goal. At the conclusion of phase I we decide whether to stop or to go on to phase II. Phase II is the actual physical survey, including replacement of monitoring wells, sampling, and chemical analysis. Phase II defines the extent of the contamination problem. We have started 140 phase II's and have completed 41.

Both phase I and phase II reports are made available for review by EPA and State agencies. Phase II may conclude there is no need

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for remedial action, or that some remedial action is required. Phase III technology development is an optional step. It is used only if cleanup technology doesn't exist or if new test standards need to be developed.

Phase IV is the actual remedial measure. It includes project design, construction, and operations. Our goal in DOD is to have all construction required for cleanup completed by 1993. This is ambitious since some complex problems don't present obvious solutions. Based on what we know now, we believe the Installation Restoration Program will require on the order of about $1.5 billion. With continued congressional support, we will make the 1993 goal.

The second element of the Environmental Restoration Program was added in the 1984 Defense Appropriations Act. It includes removal of unsafe, unsightly, and dangerous buildings and structures and other debris from active installations, inactive installations, and lands which were formerly used by the Department. The appropriation will help us clean up a wide variety of former sites.

There are also numerous formerly used military sites in the United States, and some of these sites are hazardous, unsafe, and unsightly. At some, PCB-filled transformers have leaked. Unexploded shells and bombs present a danger to people in other places. We are developing a comprehensive inventory and plan to address these sites.

The third element of the program is hazardous waste disposal. This program is aimed at the environmentally safe transportation, storage, treatment and disposal of hazardous wastes which are currently being generated by DOD activities. Our top priority concern must be to avoid mishandling.

We have taken two steps to improve our level of confidence in this area. We have assigned to the Defense Logistics Agency the worldwide disposal mission for DOD hazardous waste. This insures a higher level of centralized expertise and uniform execution of our policies. Second, using environmental restoration funds, we have streamlined our contract procedures and focused contract administration on compliance.

The fourth element encompasses a number of initiatives to improve long-range management. We are investing about $5 million to find ways to reduce the amount of hazardous wastes that we are generating on our bases. This work can pay for itself many times over. We plan to achieve total solvent recycling by 1986.

Finally, we are funding research and development to find safer, cheaper, and more effective ways to clear lands of unexploded ordnance. We need to develop better technology, and with the Environmental Restoration Program, we have begun to do so.

Last summer, I established a 2-year top-level project I call the Defense Environmental Leadership project. That team is fully staffed and we are now working at top speed to deal with some tough issues—problems like ground water protection, solvent recovery, and regional hazardous waste treatment. I expect significant payoff from the leadership project.

During the past year, the communications between DOD and EPA have improved greatly. EPA has assigned a full-time liaison officer to my environmental staff.

Last August, the Assistant EPA Administrator, Mr. Lee Thomas, and I signed a memorandum of understanding on the Superfund.

EPA maintains oversight of our environmental program. They review our pollution abatement project requirements list and certify their adequacy to OMB. We provide EPA the status of our Installation Restoration Program.

In conclusion, Mr. Chairman and members of the committee, the Department of Defense has taken on a responsible leadership role in environmental matters. We believe that the Congress has acted wisely to establish the Defense Environmental Restoration Program.

I would now be pleased to answer any questions you or members of the committee may have.

Senator STAFFORD. Thank you very much, Dr. Korb. When those of us on this committee sat here in 1979 and 1980 drafting the Superfund law, we all agreed that the Federal Government was to be treated just like any other responsible party. The obligations of the Federal Government were to be exactly the same as those of a private citizen, no more and no less. We think we made this absolutely clear in some of the law's provisions.

For example, in section 101(21), we define the term "person" to include the U.S. Government. In section 107(g) we included the following language, and I am quoting directly from it:

> Each department, agency, or instrumentality of the Executive, Legislative, and Judicial branches of the Federal Government shall be subject to and comply with this Act in the same manner and to the same extent, both procedurally and substantively, as any nongovernmental entity, including liability under this section.

Even such clear and explicit language did not satisfy this committee. We were concerned that the money collected under the law's program would be used to bail out the Federal Government, so we included the following language in section 111(e)(3), quoting directly:

> No money in the fund shall be available for remedial action other than actions specified in subsection (c) of this section, with respect to Federally owned facilities.

We included these provisions in the law for several policy reasons. First, based on our experience in other environmental laws, we believed there was a distinct possibility the Federal Government would seek to treat itself differently from private citizens. Second, we believed there was an inherent conflict in some cases between your obligations and implementation of your military mission, and the obligations of a private party charged with cleaning up in order to protect health and the environment.

Finally, we believed there should be no doubt in the minds of those living in and around military bases that an impartial officer of the Government was taking action to assure that their health and that of their children was being adequately protected from the threats of poisonous chemicals.

I will conclude by saying that these provisions were discussed during markup by this committee, and I don't recall any dissent. Despite these explicit provisions, the law has been implemented in a way that, for practical purposes, exempts the Department of Defense and other Federal facilities from the Superfund requirement.

Would you please explain why the committee was possibly wrong in deciding that the Department of Defense should be treated exactly as private parties?

Would you explain why, if you and your colleagues are implementing the law properly, you should object to oversight power in other State and Federal officials?

Dr. KORB. I think, Mr. Chairman, we all want the same thing, and that is to complete the Hazardous Waste Cleanup Program. And obviously this happened before I came into office, but our program in the Department of Defense preceded the Superfund law by 6 years, and I think our record in that area has been very good because we moved effectively and very fast. In fact, I would say it is as good or better than any other agency.

I think one of the things I've learned since I've been in Government is that the best way to get things done is to let the people closest to the action do it. Our commanders have great incentive to resolve potential problems because they know it is their decisions that will be weighed by the public. If you've got a base and it isn't doing what it should be doing, that commander will be held responsible. He can't blame it on some other agency or somebody else up at headquarters.

I think that if, in fact, we were to have to have our decisions ratified by other public agencies such as EPA, and if EPA had to come in, it would have basically a negative impact. It would delay the cleanup action. EPA, as best I can see it, is already overworked in terms of the responsibilities that they have; and if they had to review all of our plans to do things, it might add more time to having it done. I think, as I mentioned before, it would reduce the incentives for commanders to do it because if they felt that the ultimate direction were at EPA or anyplace else, they would probably wait until EPA told them what to do because they have lots of other things that they have to do, and I think it would probably add unnecessary cost.

So we obviously will comply with any law or the intent of the Congress, but I think that the present system that we have is working quite well, and my personal view is that I would hate to see anything that would slow it down.

Senator STAFFORD. Thank you, Dr. Korb. I am also going to ask you, on behalf of the committee, to provide certain information to the committee with respect to activities of the Department of Defense at project sites. I will submit that to you so that you can review it after we've concluded today.

Senator Mitchell?

Senator MITCHELL. I thank you, Mr. Chairman.

Dr. Korb, in his statement to be offered in subsequent testimony, Mr. Kamlet draws a number of conclusions that are not favorable to the management practices of the services, as he puts it. I would ask you, if you have not already received a copy of that statement, we will have the staff provide one to you and ask you to review those conclusions and respond to each of them.

Dr. KORB. I would be more than happy to, because we want to do the right thing and do it as quickly as we can.

[Dr. Korb supplied the following:]

Response to Mr. Kamlet's Statement

Mr. Kenneth S. Kamlet of the National Wildlife Federation, made the following statement in his prepared testimony:

We looked in some detail at information on 13 Virginia Federal facilities and concluded, based on in-depth evaluation (frequently hampered by major information gaps), that sites at 9 military installations in the state have "the potential to be highly hazardous to health and/or the environment." We also drew some conclusions based on an evaluation of general hazardous waste management practices by the military services. I will mention only a few pertinent ones here:

1. DOD tends to give high priority for conducting assessments and cleanups to sites which may be transferred to other ownerships, while giving relatively short-shrift to the potential for on- and off-site impacts through migration of contaminants into ground and surface waters.

DOD Response: DOD policy is to give first priority in the Installation Restoration (IR) program to installations or facilities with significant potential for migration of contaminants and second priority to those which may have been identified for release to other than DOD use.

2. "Actual restoration" of a contaminated site will not even be considered unless there are firm plans to reuse or change the ownership of the site.

DOD Response: "Actual restoration" of a contaminated site on DOD property may be considered at any site, regardless of reuse or sale plans, if it appears to be the most feasible method of controlling migration of hazardous contamination or health hazards. We err on the side of conducting clean ups.

3. Unused hazardous materials are considered unregulated under RCRA until a decision is made to discard them (this could encourage protracted storage at unlicensed and substandard facilities of dangerous materials which are likely to be discarded eventually).

DOD Response: "Unused hazardous materials" are managed the same as hazardous wastes (with respect to storage, handling, and inspection). DOD is required by the Federal Property and Administrative Services Act of 1949 (as amended), 63 STAT. 377, 40 USC 471, to attempt to reutilize, transfer, donate or sell DOD assets, to include hazardous materials. We do expeditiously dispose of hazardous material for which there is no known market, based on historical experience.

4. The prioritization factors used by DOD in making site assessment and restoration decisions do not explicitly address pathways from human exposure, such as proximity of disposal sites to potable ground or surface waters, or to productive shellfish beds, but merely consider an area's "environmental sensitivity."

DOD Response: DOD policy on prioritization for IR sites does include the consideration of potential hazards to public health, welfare, and environmental impacts. First priority tasks in the IR program include: identifying contamination sources, extent of migration, and population exposure potential; evaluating exposure of standards and control technology for confirmed migration of hazardous contamination; and informing federal, state, and local agencies of activities. Thus, pathways for human exposure are most certainly required to be considered.

5. DOD uses a non-standard substitute for the shipping manifest prescribed by RCRA—"Disposal Turn-In Documents" which accompany property turned in to the Defense Property Disposal Office—raising a significant potential for confusion on the part of disposal contractors who provide on- and off-site disposal services for DOD.

DOD Response: With respect to the RCRA manifest, DOD used two documents. We use the modified Defense Turn-In Document; and EPA or state-approved manifests (as prescribed by RCRA) whenever hazardous wastes are moved over public highways. We will use the newly approved National manifest as modified by the states, as soon as they are available.

6. DOD separates responsibility for and custody of hazardous wastes, by considering the generating facility's responsibilities at an end once a Disposal Turn-In Document is given to the Defense Property Disposal Office—even though the location or custody of the hazardous waste remains unchanged (this may remove the incentive for responsible waste management and handling, or even for reporting leaks and other problems; and it may confuse Superfund and RCRA reporting to EPA and the States).

DOD Response: With regard to the separation of responsibility and custody of hazardous wastes, DOD stores hazardous wastes at the safest storage site available on or near the generating installation. This means that accountability for a waste (from the property disposal standpoint) and custody may not be with the same party. This does not mean, however, that waste management, handling, inspection,

and problem resolution are ignored. Waste management responsibility belongs to the accountable agency within DOD, normally the Defense Property Disposal Office (DPDO). At many locations, however, the agency having custody (by mutual agreement with the DPDO) accomplishes the required waste management actions. In the future, the DPDO will be responsible for most management actions as their hazardous waste storage sites continue to be upgraded.

7. Needed corrective measures identified through IRP studies must be funded through normal appropriation accounts utilizing pollution abatement funds—a process that is uncertain and time-consuming. Funding sources for emergency clean-up and response actions on DOD facilities are unclear and may or may not be adequate for providing quick action. (The Navy's budget to do site assessment work was cut by two-thirds for FY '82 and was further cut in the FY '83 budget—we have not examined more recent budgets—straining the program's ability to accomplish its objectives, according to well-placed Navy sources).

DOD Response: Starting in Fiscal Year 1984, Congress initiated the Defense Environmental Restoration appropriation. This new appropriation is specifically intended to be used for Installation Restoration program studies and remedial action. With regard to the statement on funding Installation Restoration Program studies, the statement concerning Navy budgets for site assessments is incorrect. Installation Restoration, and specifically site assessment work, has enjoyed top priority in the Navy pollution abatement program. Site assessment study funding has never been cut, and the Navy will meet the DOD objective to complete site assessments by the end of Fiscal Year 1985.

8. A Navy directive (NAVSUP Notice 4000) specifies that only 8 groups of "predetermined hazardous wastes" a far more limited list than that encompassed under RCRA, need be identified as "hazardous wastes" or be in DoT-specified containers when turned in to the Defense Property Disposal Office (this policy, apart from its questionable legality, can only promote under-estimation of hazardous waste inventories on-hand and careless treatment of materials deserving and requiring the utmost of care).

DOD Response: The Navy directive (NAVSUP Notice 4000) referred to was the Navy implementation of a DLA listing of predesignated hazardous wastes; i.e., those that did not require screening for potential reutilization, transfer, donation or sale. Please note the previous comment on the statutory requirement for DOD to investigate the reuse of all materials.

9. Although the Clean Water Act prescribes that federal facilities must generally comply, both sustantively and procedurally, with all federal, state, and local water pollution control requirements in the same way and to the same extent as any nongovernmental entity, the Navy has sought to insulate its "industrial operations" from priority toxic pollutant and industrial pretreatment responsibilities applicable to its private industry counterparts. The Navy has sought to disregard the so-called "primary industry criteria" of the Clean Water Act, by arguing that "Navy activities are not primary industries."

DOD Response: With regard to the allegation that the Navy has sought to insulate its "industrial operations," we disagree. The Navy complies with standards, regulations, and procedural requirements of the EPA, states, and local jurisdictions. DOD, and the Navy specifically, has not disregarded any regulatory requirement.

Senator MITCHELL. I would like to ask a couple of questions now about the Environmental Audit Program. These questions may be more appropriately directed toward Colonel Daley; I don't know if you want him to respond through you or directly—it might be easier if he responded directly.

I wonder if you could—either you, Dr. Korb, or Colonel Daley—describe the Environmental Audit Program, whether or not it is mandatory or voluntary, and specifically how you feel it is working?

Colonel DALEY. I am Peter Daley, the Director of Environmental Policy for the Department of Defense.

The Department of Defense has a large number of environmental auditing programs that have run for many years. Probably the most thorough and the longest is the Navy's program, which is about 14 years old, and that includes periodic environmental audits of components throughout the Department.

We also have audit services available to the installations through the Defense technical assistance agencies, such as the Army Environmental Hygiene Agency, the Air Force Occupational Health and Environmental Health Laboratory, and the Navy's Environmental and Energy Assistance Agency. These are available to commanders.

We are now embarking on a test program of comprehensive environmental audits done by third parties. The Air Force has recently completed 15 environmental audits of its Air Force plants under the first phase of this test. The program has been extremely successful and it has led to an Air Force decision to have a subsequent audit of those same plants to make sure that follow-up is taken care of.

The Army, DARCOM—the Army Materiel Development and Readiness Command for Army Training and Doctrine Command has embarked on a similar program based partly on the favorable Air Force experience for their plants. So by going through this program of testing environmental audit procedures, seeing how they work, and hopefully drawing favorable conclusions, we hope to greatly expand our Environmental Auditing Program over the next few years, and we're moving rapidly in this area.

Senator MITCHELL. What is the relationship of the DOD to the EPA with respect to environmental audit programs?

Colonel DALEY. We intend to provide EPA with the results of our audits, as we do with our installation restoration reports and other environmental reports—we normally provide these to the EPA. We have official DOD policies, through DOD directives, that direct installation restoration reports for the Hazardous Waste Cleanup Program to be provided to the EPA and State and local regulators. We intend to share results of audit programs also with the EPA.

Senator MITCHELL. Well, you say you intend to share. Is there a specific policy which requires that environmental audit programs be submitted to the EPA?

Colonel DALEY. Not at this time because we are still under a test program, sir.

I might add that I'm in the middle of discussions with the Assistant Administrator for Enforcement and the Assistant Administrator for External Affairs at EPA on these very topics right now. We're trying to work out the optimal way to provide EPA with the data.

Senator MITCHELL. In your remarks to the EPA Regional Administrators Conference in Atlanta on April 25, last month, a copy of which I have here, seem to indicate that it is a voluntary program, and that whether or not the audit programs are delivered to the EPA will depend—not implied, it is stated explicitly in your remarks—on how they handle them.

Colonel DALEY. I think my remarks were more directed at the success of implementing an audit program in the Department of Defense—success will be dependent, in part, on the receipt of those audit reports by regulators. Environmental audit programs are, to a certain extent, voluntary by the installation. To have full installation cooperation and effectiveness in preparing the reports, requires as much positive cooperation as possible with the regulators. In addition, we all recognize that the regulatory agencies are great-

ly overextended in their ability to review Defense operations and other operations; only a very small portion, less than 10 percent of Defense installations, get inspected by EPA in any given year. Therefore auditing is everybody's interests, because our first goal in our environmental program is compliance. We want audits; the EPA wants audits, but if the audit is used as a tool to identify shortcomings of the installation and use that evidence as a way of taking strong adverse regulatory action against an installation or an agency, the inclination of that agency to conduct audits is greatly decreased. Recognizing that the audit system is entered into voluntarily, this is information that the regulators would not normally have, it's my feeling that the regulators should give the agency a reasonable amount of time to comply with the findings of the audit. That does not mean that we should be exempt in any way from regulation or that any finding of the audit that represents any kind of immediate or health or environmental problem should not be taken care of immediately according to the strongest regulatory tools available.

Senator MITCHELL. Well, I guess my question specifically is—and I think you've answered it—the audit program is, in the first instance, voluntary; and then, second, the delivery of the audit to the EPA is also voluntary. Is that what you're saying?

Colonel DALEY. At this time, but we expect to have a firm policy on the latter issue within the next few months.

Senator MITCHELL. Well, if it makes sense to conduct an environmental audit, why not make it mandatory and why not make delivery to EPA for its evaluation and advice and assistance also mandatory? And if it's a good thing, why just leave it up to the base commander to do it or some local commander? In fact, could that not—and indeed, would it not, according to your remarks to the regional administrators—produce the most likely result of places where audits are most necessary, they would not be done; and when they were done, the audits that were most serious or required the most action would not be turned over to EPA?

Colonel DALEY. I guess the answer to that is, we haven't resolved it because we want the system to be initiated by the installation commanders because a program that is generated from the bottom up, so to speak, is much more likely to be effective than one that is directed from the top down.

Senator MITCHELL. Well, now, the entire military structure is established on the basis of you getting your orders, and compliance occurs.

Dr. KORB. Let me—I think you are trying to repeal the laws of bureaucratic behavior. We have some 1,300 installations in the Department of Defense, and it's impossible—for example, we put out orders that the thermostats have to be set at such-and-such a number because of trying to save energy, for example. Well, unless we go around and inspect every barracks, there's no way we can insure that that happens. And if you were in the Army, you know that soldiers can beat that. They can put a cold beer can under the thermostat or whatever they have to do to get it.

What Colonel Daley is trying to say is that because we are so big, and because we are so complex, and because we cannot check up on every aspect of a thing, it's much better when the local people do

it. It's their program; they come forward with it. And I think what he's trying to guard against is not penalizing the person who becomes more aggressive. It's the same type of thing; if you don't bring up a problem, people are not going to want you to deal with it.

Senator MITCHELL. Well, I agree with that, Dr. Korb. But agreeing with everything you said, surely you could not contest the fact that if you have an environmental audit program that makes sense in any entity, and especially in a military organization—if you say, "This is voluntary" on the one hand, or if you say on the other hand, "This will be done" it's going to be done more often and better in the latter case than in the former.

Dr. KORB. Not necessarily.

Senator MITCHELL. Not necessarily.

Dr. KORB. Because people will say, well, we tried to do it; we got slowed down; there would be all kinds of other priorities; we had to prepare for this exercise—so we try to experiment, we try to——

Senator MITCHELL. There would be an absolutely alarming effect on the whole concept of military operations if that principle were applied in other areas.

Dr. KORB. Well, again, I think you've got to recognize that you're dealing with bureaucracy, and the military is a bureaucracy. When you have orders that get transmitted all the way down, unless you have one inspector for every person, it's not going to be carried out as well.

But I think we're both saying the same thing. Colonel Daley says that we're trying it with an experiment to see if, in fact, we can work this from the bottom up. Now, obviously, if it doesn't work then we will step in and say, OK, let's go ahead and do it. But I think if you take a look at our record as compared to lots of other groups that are dealing with this, given the magnitude of the problem, I think that we're doing pretty well. That's what we want to do; we want to make sure that we continue to get the results.

Senator MITCHELL. I didn't intend any criticism; I just think it's obvious. My time is up, I'll just conclude by saying it's obvious to me, and it should be obvious to you, that it's human nature that if you make it a voluntary program as opposed to a mandatory program——

Dr. KORB. Well, we set policy guidelines to tell them we want to do these things, and——

Senator MITCHELL. Thank you, Mr. Chairman. I have some additional questions which I would like to submit in writing. I have to go to another meeting, but I will return tomorrow.

Senator STAFFORD. All right. The Chair will reserve the right to every member of the committee, in view of all of the other meetings this morning, to submit questions in writing.

I didn't say so, but I think we'd better limit ourselves to 10 minutes questioning since we have numbers of witnesses yet to go.

Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Just a very brief reminder, if I might, Dr. Korb, in my State of New Jersey—as I'm sure you are aware—we have 18 so-called inactive hazardous waste sites at federally owned facilities, primarily at Department of Defense installations. All of these sites require

expedited attention if ground water contamination and other threats to the public and to military personnel are to be prevented. Many of these sites are located in the remote reaches of southern New Jersey; Fort Dix, located at Wrightstown, that borders on the Pine Barrens, and that's our largest aquifer. The ground water in the Pine Barrens moves so rapidly that it's said that a 12-inch pipe could produce 1 million gallons of water a day. These characteristics make the Pine Barrens and other New Jersey superior aquifers extremely vulnerable to contamination, and it's my hope that Federal facilities such as Fort Dix will be quickly and thoroughly cleaned up. I'm happy to hear of your commitment to do so.

I'm concerned about a few things that were said in your testimony. Both of you, I must say, are very tolerant of the agencies of Government that are overworked, and I would encourage you to remind them what their responsibilities are and not to be so kind because, you know, we're not kind to you and our voters are not kind to us unless we get the job done.

It's really funny; I remember my days as a corporal in the Army. I didn't think it was a bureaucracy: I used to get an instruction and I would carry it out. I didn't debate it very long.

But in terms of the audit side of the thing, you described briefly the environmental auditing system, and I'd like you to expand, if you would, on the audits. Is this a critical part of initiating your phase I analysis? Must the environmental audits be approved by local facilities, part of the environmental leadership program, is there a conflict of interest—what's the procedure there with you?

Colonel DALEY. We have two separate programs, sir. We have an environmental audit program which addresses the scope of all environmental compliance issues—air pollution, water pollution, ground water, hazardous waste, et cetera.

In our installation restoration program we issue four phases of reports, which are separate from any environmental audit reports. These are evaluations of the hazardous waste cleanup program at an installation. This is completely separate from any internal audits that we do. In the phase I program we look at records, talk to people, we walk around a base, try to get an idea of what hazardous waste may have been disposed of at an installation to see if there is a need to do a field study. The phase I report is made available to all State and local agencies and to the EPA as soon as it is finished.

If there is a need for phase II; that is a follow-on to phase I in which we look at the actual physical conditions of the sites, we do ground water sampling, we do subsoil sampling, et cetera, then we perform the studies and issue those reports also to the public. If cleanup is necessary, we develop a cleanup plan which is also coordinated with the public, and final cleanup documentation.

Senator LAUTENBERG. And the audits are done by which group in your organization?

Colonel DALEY. The Installation Restoration Program—the Hazardous Waste Cleanup Program is what I assume you are talking about—these are done almost all by contractor efforts, supervised by technical agencies within the Department, in the different services.

Senator LAUTENBERG. The EPA inspections, what role do they play in your evaluations? I believe that you said only about 10 sites a year were inspected by EPA. Is that necessary for you to discover what you've got there, to understand what you've got?

Colonel DALEY. I said 10 percent of DOD installations are visited for environmental compliance inspections a year. In the Hazardous Waste Cleanup Program, I don't have specific numbers on the number of installations visited by EPA people for Hazardous Waste Cleanup Programs. I think it's probably a fairly high percentage. And when they do review our reports, any comments they may develop as a result of their visits to our sites are fully integrated with our follow-on study and cleanup plan.

Senator LAUTENBERG. Dr. Korb, your testimony you discuss briefly RCRA, and RCRA is critical in preventing the development of future Superfund sites. Is DOD subject to all the RCRA regulations?

Dr. KORB. Yes, sir.

Senator LAUTENBERG. Of particular concern in my State is the manifest system or the procedure or process. Do DOD facilities use manifest forms, the same forms used by non-DOD handlers of waste materials?

Dr. KORB. We will use the new national manifest.

Senator LAUTENBERG. Do the States get copies of those?

Dr. KORB. Yes, sir. As Colonel Daley mentioned, we coordinate with the appropriate State authorities in all of the things that we do.

Senator LAUTENBERG. I heard you say also that these audits are made public as soon as they are completed, as soon as they are prepared in formal form?

Dr. KORB. Yes, sir. That is true for installation restoration program reports.

Senator LAUTENBERG. In the December update of your DOD Installation Restoration Program, you listed eight facilities in New Jersey. The phase I study for all of these facilities has been completed and the report published. Would you please provide me with these reports and the schedule and description of future work plans. And also I'd like information on how many of these facilities may be causing off-site contamination of groundwater or the air.

Mr. Chairman, I thank you.

Senator STAFFORD. Thank you, Senator.

Senator Evans.

Senator EVANS. Dr. Korb, I am sorry I wasn't here to hear your initial testimony. I have read your testimony, however, and I must say as a comment that I find a little bit strange your typification of the military as a bureaucracy. Certainly it is, but I hope it's a different kind of bureaucracy than our civilian bureaucracy. Otherwise, we're in deep trouble militarily.

Dr. KORB. The point I was trying to make here was that if you punish somebody for going out and finding out what the problem is and then turning it over, and you say, well, now you've got to fix it up right away, or, why haven't you fixed it up before—there will be less incentive for people to do it. That's the point I was trying to make. I think as a former Governor of a large State you understand that you have to have these things; they work best when the

people down below—the messengers—are not shot, if you will, when they bring forward the bad information.

But that's what we need. We need to find out what's wrong, and we need to get the funds to fix it up as quickly as we can.

Senator EVANS. I'm not sure it's a question of shooting the messenger, but what do you figure the reluctance would be on the part of anyone when, given the charge to identify and then to clean up hazardous waste sites, why would there be a reluctance on their part?

Dr. KORB. I don't think there would be a reluctance, but I think what you have to do—it's a very complex thing. The law is very specific as to when DOD funds can be used, when you have to go to court. We're at court right now with a major oil corporation. What we're trying to say is we want people to bring these forward, and then we want to help them take the appropriate action; but we don't want to have somebody use that as a tool to say, you know, it's your fault that this occurred in when in fact it may not have; that's what we're interested in doing. Funds have to be made available; there are processes by which funds get distributed and these actions can be taken.

Senator EVANS. I guess I am just curious as to why anyone would feel that their identification of sites would somehow be viewed as being in danger of being shot as the messenger?

Dr. KORB. Well, let me give you another analogy. It's something that I know you're familiar with. In the Department of Defense we identified all the problems that we had with spare parts. We went out and found the fact that we were being overcharged. And if you look at the papers for the last 6 months, you would think that we had created the problem rather than finding it. That's the type of thing that I'm talking about.

Senator EVANS. I understand thoroughly when you are talking about how things are viewed by the press. I have some experience with that, but that's really not what we're talking about.

Dr. KORB. Well, I understand that. We're trying to strike a balance and we will, as I mentioned, move expeditiously there. But I think Colonel Daley was trying to tell the people he was addressing that if you go to the press with these things and say, "Look how bad DOD is," that makes it difficult for us to do what you want us to do.

Senator EVANS. You mentioned in identification of hazards that each service ranks its own in order to build, ultimately, a combined DOD list. Are there some specific DOD unified standards by which each one of the services ranks its own, or is that just given to each service to make up their own mind as to how they rank their hazardous sites?

Dr. KORB. Well, essentially it's kind of a commonsense standard. You clean up the things that are the worst first; that's essentially what we do, the ones that are causing the most danger to the people in the area.

Senator EVANS. Is that just in the view of whatever service happens to have the hazardous site?

Dr. KORB. Yes, basically it would be the service or the individual people making the evaluation. But up to now, we really haven't

had any problem in the sense that we know what the worst are and then we go ahead and fix them as quickly as we can.

Senator EVANS. So you do feel that you have a good and clear picture on a comprehensive basis of the order of problems within the Defense Department as a whole?

Dr. KORB. Sir, as I mentioned in my testimony, the Defense Department started about 6 years ahead of the Superfund law. We recognized it would take us at least a decade to do it, and I think we are proceeding along that timetable.

Senator EVANS. From your testimony, I think it would be fair to say that you feel that the current relationship with EPA is satisfactory and an appropriate one from the Defense Department's viewpoint?

Dr. KORB. Yes, sir. As I mentioned, Mr. Thomas and I have signed a memorandum of understanding. We have an EPA Senior Executive Service employee fulltime on my staff.

Senator EVANS. Do you have any sense as to EPA's view as to that current relationship or whether they believe it ought to be stronger or changed at all in terms of ultimate responsibility?

Dr. KORB. I think EPA is quite happy with the way in which we're going about doing things, and I think feels that we have an excellent record in this area given the magnitude of the establishment that we oversee.

Senator EVANS. I was particularly struck in your testimony by the obvious size and complexity of your problem and the number of millions of acres of land under Department of Defense management. A pretty high percentage of that, in terms of current hazardous waste, I guess, would be the unexploded ordnance, both on Department of Interior and Department of Defense lands. If I remember, it adds up to something like 8 million acres. The comment was made in your testimony that if there were a way to sanitize those sites, that much of it could either be sold or utilized for other effective purposes. What is the current outlook? Are you close to that goal of cost-effective rehabilitation of those lands? Or is that something that's going to be a long time in the future?

Dr. KORB. Well, again, the costs—we want to err on the side of safety, if you will, especially when dealing with unexploded ordnance, some of it left over from the——

Senator EVANS. I'm sure you do. All you have to do is sell it and have something blow up, and you'd be sued, or somebody would.

Dr. KORB. That's right. And right now, for example, the Department of Interior was asked to prepare a list of land under its control on which DOD has caused some problems, and they have about 129 items on that list. We can furnish it to you for the record. This list, as you know, was initiated at the request of congressional committees with jurisdiction over Interior activities, and we're looking at each of them. Right now, of that 129 items, we've found some sites in which we're certain that you have serious contamination by unexploded ordnance. What we do is go in and work on those areas.

Senator EVANS. Are you in the process, or do you intend to analyze both the Department of Interior and the Department of Defense sites with a view toward something of a similar ranking as to the other hazardous sites? And I suppose in this case the ranking

would be not only which ones were necessarily the worst, but which ones, if cleaned up, could bring the greatest return either in terms of alternative use or in terms of sale.

Dr. KORB. Well, the Army Corps of Engineers goes in and does that ranking for us. As you know, we have another program, we have the Federal Surplus Property Disposal Program in which we work through the White House, and we go out and survey those things. If we find out that they do have this particular value then we move in that direction, too. Our main concern, really, is to make them safe. That's our main concern.

Senator EVANS. Is the technology yet available to make you relatively assured that you can do that, obviously you could dig up every square foot of ground, but in a cost-effective way, is the technology yet available?

Dr. KORB. Well, I have to say both yes and no. In some cases it is; but as I mentioned in our four-phase program, when first we go out and find the problem and first we sometimes have to initiate an R&D phase to help us deal with the problem, and once in a while the unexploded ordnance comes in that particular category. We are spending half a million dollars this year on research to locate and remove unexploded ordnance.

Senator EVANS. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Evans. And thank you very much, Dr. Korb. We appreciate your help this morning.

Dr. KORB. Thank you.

Senator STAFFORD. The next witness will be Mr. Ken Kamlet, who is director of pollution and toxics programs, National Wildlife Federation. We would appreciate your summarizing your statement, Mr. Kamlet, as far as you can. We will place the full statement in the record. In view of the number of witnesses pending, the Chair is going to have to suggest to colleagues that we cut our question periods to 5 minutes.

Mr. Kamlet.

STATEMENT OF KENNETH S. KAMLET, DIRECTOR, POLLUTION AND TOXICS PROGRAM, NATIONAL WILDLIFE FEDERATION

Mr. KAMLET. Thank you, Mr. Chairman.

I think Dr. Korb's unwillingness to appear on the same panel with a representative of the country's largest public interest environmental organization, the National Wildlife Federation, illustrates a big part of the problem here. DOD unfortunately tends to regard itself as above the average citizen and indeed, in many cases, above Federal and State environmental laws and regulatory agencies. I think this lends support to the need for adding strengthening language to the Superfund law to make clear that DOD and other facilities are in fact not above the law, are accountable to the public, and do not deserve any kind of special or exalted status.

The number of Superfund sites that are owned or operated by Federal facilities is large. There are probably at least 1,100 to 1,400 individual Federal facility Superfund sites, and some 80 percent or 83 percent of those are Department of Defense facilities. Some of these sites represent potentially very significant problems based on the size and the nature of the industrial-type operations with

which they are associated. For example, by the Navy's own estimates, Navy ships and shore activities in the United States generate some 19 million gallons of liquid hazardous waste and some 35 million pounds of hazardous waste solids every year. And the types of highly hazardous wastes that are generated by various Navy activities are illustrated in attachments 1 and 2 to my prepared statement.

In 1982 a contractor to the Chamber of Commerce, Risk Science International, attempted to compare the hazard potential of certain Department of Defense Superfund sites to that of the highest hazard private sites listed on the national priorities list. RSI calibrated the Air Force's site scoring protocol against the MITRE protocol which EPA uses for private sites, and then estimated the scores and the ranks that the Air Force's top 100 sites of concern might get under the MITRE scoring. This analysis concluded, rather strikingly, that all 100 of the Air Force's top 100 sites would have scored above the NPL cutoff score and thus would have merited inclusion on the NPL. And 33 of the Air Force's top sites, located at nine separate Air Force installations in eight States, would have been included among the top 40 NPL sites.

However, despite these results which would suggest that a high percentage of Federal facility sites warrant inclusion on the NPL, it's rather unlikely in my view as a practical matter that very many Federal sites will be added to the NPL any time soon. For one thing, only about 50 or 60 Federal facility sites are now being actively screened by EPA for possible inclusion on the NPL during the next update of that list this summer. And although the installation restoration program—about which the Defense Department is so fond of boasting has existed since 1975, 5 or 6 years longer than the EPA Superfund program—DOD and EPA have not been able to come up with enough information to even permit the scoring and evaluation of additional DOD, let alone non-DOD, sites.

For another thing, the scoring system, which gives disproportionately heavy weight to population density in the immediate vicinity of Superfund sites, will inevitably yield misleadingly low scores for large, sprawling DOD sites which are often isolated from population centers despite the fact that ground and surface waters flowing through these installations may be in serious jeopardy with a high potential for off-site migration of hazardous substances.

Finally, the timely collection and dissemination of incriminating information is not likely to be carried out as enthusiastically by financially liable Federal owners or operators or their paid contractors as it is by neutral contractors hired by EPA or an environmental protection oriented State agency to evaluate private NPL candidates. But even if we surmount this hurdle and problematic Federal facility Superfund sites eventually make it onto the NPL, we are still a far cry from the proper cleanup of such sites. Federal facility sites on the NPL would be under no compulsion to do the sort of rigorous site investigation and feasibility studies, the so-called RI/FS's that EPA not only requires but actually carries out for all NPL-listed private sites. Very few DOD sites have made it beyond phase I IRP assessments.

Where a Federal facility does conduct any sort of remedial study, it carries it out itself or by contract with no EPA input or supervi-

sion except if a facility chooses to request such involvement. Indeed, longstanding DOD policy, which I assume is still in effect, is to consider actual restoration—in other words, cleanup of a hazardous waste site—"only when plans to reuse or excess the land are firm." In other words, unless contaminants can be shown to have migrated off-site or the property is about to be transferred to private ownership, DOD's view seems to be that how they deal with their Superfund sites is nobody's business but their own.

Finally, in the event that a cleanup evaluation plan or response action occur and prove inadequate in the view of EPA, EPA has no bargaining leverage since the Department of Justice has foreclosed in advance the possibility of court enforcement under any circumstances. Such a posture seems as counterproductive and as inimical to good faith negotiation as President Carter's announcement at the onset of the Iranian hostage crisis precluding the use of force against Iran.

What we have here is more than a case of the fox guarding the henhouse. It's a case of the farmer inviting the fox over to dinner, and we're the chickens.

We urge this committee to close these loopholes by amending or clarifying the Superfund law in at least the following five ways.

First, reaffirm the right of EPA and the Department of Justice to sue recalcitrant Federal facilities with the defendant agency having to seek its own counsel, not the Department of Justice. This is the approach taken in section 407 of H.R. 5640, the Florio bill, recently reintroduced.

Second, reaffirm the requirement that the hazard ranking system or the MITRE model be applied to all Federal facility Superfund sites, preferably in accordance with a prescribed schedule, for purposes of ranking them for inclusion on the national priorities list. Require all appropriate Federal facilities to then be included on the NPL and then require all Federal agencies with a site on the NPL to prepare an RI/FS study on that site which is acceptable to EPA, and which meets EPA standards.

Third, provide clear EPA authority to carry out its own RI/FS study on a Federal facility where necessary and appropriate, and to make clear EPA's authority and responsibility to review and approve, or refuse to approve, RI/FS's prepared by other Federal agencies.

Fourth, provide clear citizen suit authority under CERCLA to allow third parties to compel both enforcement action by EPA where that is warranted, and compliance by noncomplying Federal facilities.

And finally, fifth, establish an explicit, high-public visibility mechanism, including specific time deadlines and milestones, for the negotiation of Superfund site cleanup agreements between EPA and other Federal agencies. If no agreement is reached, EPA should be required to pursue appropriate legal action against the noncomplying Federal facility. We support the general approach taken in this regard by the Moody bill, H.R. 4760, in the House and the companion Proxmire bill, S. 2407, in the Senate.

We appreciate this committee's efforts and interest in the Federal facility hazardous waste problem and look forward to working

with it in perfecting appropriate legislative amendments. Thank you.

Senator STAFFORD. Thank you very much, Mr. Kamlet. The Chair will not have questions, but that is not to indicate a lack of interest.

I would remind my colleagues that we have 1 hour to complete all the rest of the witnesses in front of us, and I would suggest that those with questions try to limit them to 5 minutes if we can.

Having said that, Senator Mitchell?

Senator MITCHELL. Thank you, Mr. Chairman.

Thank you for your testimony. I may submit additional questions in writing. I would like to ask you, were you present during the testimony of Dr. Korb and Colonel Daley?

Mr. KAMLET. Yes, I was.

Senator MITCHELL. You heard my question about the Environmental Audit Program?

Mr. KAMLET. Yes.

Senator MITCHELL. Do you believe that there would be more audits done at military installations if it were made mandatory rather than voluntary?

Mr. KAMLET. Certainly, I do, for the same reason that it makes no sense to treat the chemical industry or any other aspect of private industry on a similar voluntary kind of basis.

Senator MITCHELL. All right. And do you believe that the audits, upon completion, should be required to be submitted to the EPA?

Mr. KAMLET. Clearly, and a lot of other information besides.

Senator MITCHELL. Thank you very much, and I thank you for your very forthright statement. You reached what you call conclusions in your statement, and I have asked Dr. Korb to submit in writing specific responses to those, either accepting your conclusion or, if he disagrees, challenging it and providing the information. And when that's received, I'll ask the staff to make that available to you so that you may, in turn, if you disagree with any of his statements, rebut them in turn.

Mr. KAMLET. I appreciate that.

Senator MITCHELL. Thank you very much. I thank the Chair.

Senator STAFFORD. Thank you very much, Senator Mitchell.

Senator Lautenberg?

Senator LAUTENBERG. Thank you, Mr. Chairman.

I take it that neither Dr. Korb, Colonel Daley, or anybody else from the Department of Defense is still in the room; is that so?

[No response.]

Mr. KAMLET. I think they would regard that as inconsistent with their status, I guess.

Senator LAUTENBERG. Obviously they don't think that your testimony is worth an awful lot, but I think that the Defense Department has a responsibility just like any other department of the Government; and I, too, am surprised that it can be described as a typical bureaucracy because when the command goes out we ought not to have a debating society as to whether or not we move ahead on our responsibilities.

However, Mr. Chairman, one of the things that we noted in our discussion with the DOD people was that there is an inspection of facilities by EPA. Obviously by the tone and, I think frankly, the

quality of your testimony, you don't think that we can leave the policing of this to DOD and its various departments.

Colonel Daley is still here? Oh, I'm sorry, you are there. Then I unfairly suggested that you flew the coop, but we're glad to have you.

In fairness, I thought you were fairly forthright in your testimony and I bet you'd be willing, but I won't ask you to sit with Mr. Kamlet.

However, the fact is that there are 10 percent—I mistakenly thought it was 10 sites per year—reviewed by EPA. Based on that the arithmetic is very simple; it would take 10 years to look at what's going on. Is there—can we leave it to the DOD to make sure that they are doing their job, or do we need the EPA involvement in monitoring and identifying these sites?

Mr. KAMLET. I think we very much need active EPA involvement and involvement by relevant State regulatory authorities as well. Dr. Korb indicated that this was conceived of as a decade-long process. What perhaps he has forgotten, because it was before his time at DOD, is that the Installation Restoration Program at DOD in fact was initiated in 1975, so that that 10-year period is almost up and about all we've got to show for it is about three sites that I'm aware of within the Department of Defense system on which active cleanup efforts are underway. We've got a complex, bureaucratic process going on, a four-phase IRP program but the vast majority of sites are in the earliest elements of those phases; and I think we're just as far now from ultimate cleanup of many problem sites as we were, frankly, back in 1975. I don't see any justification for putting Federal facilities on a different footing or giving them a different status than problem private sites, and I think that EPA ought to be as actively involved in the oversight of those sites as they are for private sector sites.

Senator LAUTENBERG. In respect to the Chairman's admonition about time I will relinquish my post now and submit questions to you in writing. Thank you.

Senator STAFFORD. All right, thank you very much.

Senator Evans?

Senator EVANS. Mr. Chairman, I join with Senator Mitchell and Senator Lautenberg in a real concern about the relationship of the first two witnesses. I understand the sensitivity of the administration witnesses in not wanting to necessarily be subject to badgering by other representatives or witnesses, but we're going to have to ask—and I would intend to follow up in the same manner as Senator Mitchell, in fact I would join with him—in submitting the kinds of questions to the Department of Defense that would elicit some response to the charges and the elements in Mr. Kamlet's testimony. It's a tedious way to operate, to have to exchange all of this information by letter and by written questioning because there's no opportunity then for cross-checks or asking someone else a follow-up question. I would hope that in the future the witnesses from the administration would be willing, here and in front of the committee, to respond to some of these things. We would get a lot further a lot faster, it seems to me, than their standing on their privileges of not having to appear on the same panel.

Having said that, I would like to work with Senator Mitchell in developing whatever questions are necessary so that we can get these two bits of testimony more in line.

Less you think I am buying all of your testimony, however, let me turn and ask about something that's a little bit disturbing. In your testimony you make the statement that—

> There is less inclination to cooperate in providing full and rapid access to information, to facilitate the NPL scoring and listing process, for Federal rather than for private sites. (For example, unfavorable data in draft reports is likely to stay in draft—undisclosed—form for long periods with little incentive to speed the issuance of inculpatory final reports.)

Is that a statement made with evidence that that in fact is happening, or is that a statement made just suggesting that that's a likelihood that might happen?

Mr. KAMLET. Senator, that statement is made on the basis both of direct and of indirect evidence. As I also note in my prepared statement, we conducted a year and a half long study a couple years ago of Federal facility sites in the State of Virginia, and it was our experience then that many reports that came out of the IRP process stayed in draft form for inordinate periods of time, and that DOD was fond of refusing access to the information contained in those draft assessments until those reports had been finalized.

I have also talked to people at EPA and people familiar with similar problems at the State level, and they confirm my impressions of the difficulties in gaining access to information from DOD, from DOD facilities. And it was their sense, as it was mine, that a common ploy on the part of the facilities involved was to retain things in draft form and rely on the draft nature of the information as an excuse for withholding release of that information until the material was finalized.

Senator EVANS. Well, I can understand some of the reluctance, perhaps, to withhold information during a draft, period. It has to be subject to review to insure that the ultimate material is accurate and correct. When you say "an inordinately long time," do you have any sense of what that is? How do you determine what's an inordinately long time as opposed to a reasonable time for thorough analysis?

Mr. KAMLET. That's clearly a subjective judgment.

Senator EVANS. I know it is.

Mr. KAMLET. Throughout the year and a half long process that we were engaged in in Virginia, certain reports throughout that period were described as being in draft form and no progress seemed to have been made throughout that period in getting any closer to a final version.

Senator EVANS. Do you have other examples of that inordinately long draft period other than the studies conducted in Virginia?

Mr. KAMLET. Except having that same concern cited indirectly by State officials in California, for example, where this was cited as a concern on their part. They expressed great frustration and exasperation at the difficulty they faced in getting access to information from facilities in their State.

Senator EVANS. All right.

Mr. Chairman, that's fine; I'll yield. We'll make a request for that information more explicitly and in writing so we have something in front of us.

If you can provide us with as much detail of the sites and the timing and where you feel there are particular problems of inordinately long draft periods, that would be very helpful.

Mr. KAMLET. Certainly. (See p. 474.)

Senator STAFFORD. Thank you, Senator Evans.

I would suggest, since the Chair is asking for a lot of information from Dr. Korb, that maybe the Senators who are interested should all get together and possibly submit one joint set of questions and in that way avoid duplications, if that's agreeable.

At this point Senator Mitchell had one additional question, and Senator Burdick has just arrived, so if you can stand by a minute, Mr. Kamlet.

Senator MITCHELL. Mr. Kamlet, the legal basis for the position of the Department of Defense is, of course, Executive Order 12088, issued by President Carter in October 1978. You refer to that briefly in your testimony. At that time, of course, the Superfund law had not yet been enacted. Three years later the Superfund law was enacted and, as Senator Stafford has already pointed out, it provides specifically that the U.S. Government will be included under its terms, and that each department or agency of the Federal Government shall be subject to and be required to comply with the act in the same manner and to the same extent as any nongovernmental entity. You are familiar, perhaps not with the precise words which I just read, but with that provision in the Superfund law, are you not?

Mr. KAMLET. Yes; I am.

Senator MITCHELL. I would like to have you provide to this committee, and I would at the same time perhaps ask the staff to provide the committee, with an analysis of the legal and the practical effect of the enactment of the Superfund law after the issuance of the Executive order and what impact it has on the Executive order. It must be presumed that the Congress was aware of the Executive order when it passed the Superfund law, and that the President—indeed, it was the same President who signed the Superfund Act into law—who had issued the Executive order. And I wonder whether or not there is any basis for concluding—I do not know the answer, that's why I am asking the question—that the entire legal basis upon which the Department of Defense exempts itself from the Superfund, whether that is a valid basis in light of the events I've just described.

Mr. KAMLET. Senator, I'd be happy to do that. I would like to note, as I describe in my statement, there is a specific savings provision in that Executive order that makes clear explicitly that the procedures for administrative negotiation, and so forth, within the executive branch are intended to be in addition to, and not in lieu of, any other legal requirements, sanctions, enforcement prerogatives, and so forth that may be applicable to the Federal agencies. So whether CERCLA predated or postdated the Executive order, it seems to me the order furnishes no basis whatever for the proposition that DOD is somehow less subject to the requirements of

CERCLA or RCRA or any other Federal environmental law than their private industry counterparts.

Senator MITCHELL. Well, I have read that; in fact, I have it before me and was aware of that. Of course, if I were a lawyer for DOD I would argue that since the Superfund law was not then in existence, the reference to other laws could not possibly have contemplated the Superfund law. But be that as it may, I would like to have you address in writing the question which I've addressed to you, and the staff, the same.

Mr. KAMLET. Certainly. (See p. 474.)

Senator MITCHELL. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Mitchell.

Senator Burdick, do you have any opening statement or any questions of this witness?

Senator BURDICK. No, thank you.

Senator STAFFORD. All right.

Well, we thank you very much for being with us this morning.

At this point, because Senator Moynihan is necessarily unable to be with us, the Chair will put in the record, there being no objection, a statement by Senator Moynihan with respect to the issues, particularly of future sources of financing for the Superfund program.

[Senator Moynihan's statement follows:]

STATEMENT BY DANIEL PATRICK MOYNIHAN

Committee on Environment and
Public Works

Superfund Hearing

May 23, 1984

Mr. Chairman,

We have before us today an issue of particular interest to me -- the appropriate type of fee or tax to finance the Superfund program. In 1980, I was deeply involved in this issue, both as a member of this Committee and the Committee on Finance. After considerable debate and discussion we decided to place a tax on 42 chemical feedstocks, crude oil and imported petroleum products. This tax was designed to finance 86% of the $1.6 billion Superfund trust fund, with the remaining 14% coming from appropriated revenues.

Our purpose, then, was to impose the tax at the beginning of the chain of commercial production. The chemicals that we tax either are themselves hazardous or are the basic building blocks for other hazardous substances. There are a limited number of companies manufacturing these chemicals, which makes tax collection a managable task.

Crude oil and imported petroleum products are taxed at .79 cents per barrel. The tax on chemical feedstocks ranges from $4.87 per ton for acetylene to 24 cents a ton for nitric acid. The tax began on April 1, 1981 and terminates on September 30, 1985.

These tax rates were established in 1980 with the expectation that they would raise $1.376 billion, representing 84% of the total trust fund. Through fiscal year 1983, $604 million in

Superfund taxes were collected. By the end of fiscal year 1985, it is estimated that the Superfund tax will have generated $1.162 billion in revenues.

Overall, the current tax has proven to be a steady and reliable source of financing for the Superfund program. There will be a shortfall in projected revenues, but not a substantial one -- about sixteen percent less than we anticipated. Part of this shortfall reflects the unpredicted recession of 1981-82.

Mr. Chairman, as we look to the reauthorization of the Superfund law this year, we must again address the issue of how best to finance the program. Let me say from the outset, it is most clear that we do need to increase the resources available to the Superfund program. The Environmental Protection Agency (EPA) estimates that between 1,400 and 2,200 hazardous waste sites will need to be cleaned up, at an estimated of between $8 and $16 billion.

The question is, how do we raise such sums. Do we simply continue the chemical feedstock and oil tax? Or, do we take a different approach, such as a tax on hazardous wastes, once generated? Perhaps, a combination of the two would be most appropriate.

On March 18, 1983, I introduced a bill (S. 860) along with Senators Hart and Gorton to substantially expand the Superfund program and to replace the current feedstock tax with a tax on the generation of hazardous wastes. The bill would raise some $13 billion over ten years to fund the cleanup of hazardous waste sites under the Superfund program. Just as important, the tax provisions in the bill are designed to tax the source of the

problem -- hazardous waste -- and in so doing provide an economic incentive to develop alternatives to the continued production and disposal of hazardous wastes. Such alternatives include waste reduction, recycling, biological treatment and incineration.

We now generate some 264 million metric tons of hazardous waste per year in this country, more than one ton per person. A staggering figure. Large quantities of hazardous wastes are placed in landfills, often with little or no pre-treatment to reduce their toxicity. Many industrial wastes are simply deposited in large, open surface impoundments. Only small quantities of hazardous wastes are being recycled or reclaimed.

Incentives to improve the handling and treatment of hazardous wastes are clearly in order. It is much less expensive, for example, to place hazardous wastes in landfills or to hold them in surface impoundments, than to incinerate them.

I would suggest that a tax on hazardous waste generated would provide an appropriate incentive to encourage waste reduction. I understand that such a waste-end tax may not be as reliable a source of revenue as the feedstock tax. A waste-end tax was enacted in my state of New York in 1982. In its first full year of operation the tax raised only $3 million of a projected $10 million. This is a major shortfall, indeed. Other states that have enacted waste-end taxes have found themselves with similar shortfalls.

The irony is that if a waste-end tax truly works -- that is, encourages waste reduction -- it will be a declining source of revenue so long as the tax rate remains unchanged. As such, it may not be wise to rely on a waste-end tax as the sole revenue source for the Superfund program. Rather, I believe that it should be considered in combination with a feedstock tax. We must use all reasonable incentives to reduce the amount of hazardous waste produced in this country, and the waste-end tax is just such an incentive.

Senator STAFFORD. We will ask the next panel—we hope there will be no objection here—Mr. Harold A. Sorgenti, president, Atlantic Richfield Chemical Co., and Mr. Robert Muth, executive vice president of ASARCO of New York, to come to the witness table.

Gentlemen, we will go in the order in which I called your names, if that's agreeable to you. I apologize for the time compressions we always seem to have to operate under here. We're liable to be interrupted from now on by rollcall votes on the floor of the Senate, but we'll do our best and we would appreciate if you could summarize your statements in 10 minutes each, with the understanding that your full statements will be part of the record.

STATEMENT OF HAROLD A. SORGENTI, PRESIDENT, ATLANTIC RICHFIELD CHEMICAL CO., ACCOMPANIED BY JOAN DiNAL AND GARY KOVALL

Mr. SORGENTI. Thank you very much. My name is Harold Sorgenti and I have with me two associates, Ms. Joan DiNal of our legal department and Mr. Gary Kovall of Arco Petroleum Products Co.

I am the president of Arco Chemical Co. I am here not only to represent our company but the thousands of employees who will be affected by this legislation.

Atlantic Richfield supports the continuation and reauthorization of Superfund. However, we urge you to adopt a different taxation mechanism for supporting the current, or an expanded, fund; and we will introduce such a mechanism today.

We oppose an increased feedstock tax because of the disastrous effect it will have on our industry. The industry has suffered from both overcapacity and significantly increased feedstock costs; growth in the industry has dramatically declined. The chemical trade balance has declined from $15 billion in 1980 to $10.6 billion in 1983. Chemical employment has dropped by 50,000 in the last 2 years. The petrochemical industry lost, in 1982, $350 million to $400 million. We lost approximately half that amount last year. We are now approaching breakeven in the first quarter of this year.

We represent Arco Chemical, 6 to 8 percent of the industry. Our performance was consistent with that of the industry and, like many other producers, we shut down permanently a number of facilities producing petrochemicals and their derivatives.

Despite these poor earnings, Superfund tax payments by the petrochemical industry averaged $155 million per year with only partial tax cost passthrough. Some legislative proposals would increase the tax rates 300 to 600 percent. The legislation sponsors apparently assume that the petrochemical industry can continue to bear two-thirds of an expanded fund; it simply cannot. The proposed tax rate will result in plant shutdowns, and the offshore manufacture of these chemicals and their downstream derivatives by resource-rich foreign countries. Congress will be undermining one of the few industries that has provided this Nation with a superior technological position and a positive balance of payments. This legislation will result in the destruction of the domestic petrochemical industry and a loss of thousands of manufacturing jobs.

Let me make some specific points.

POINT NO. 1—PROPOSED TAX INCREASES EXCEED PROFIT MARGINS IN OUR INDUSTRY

Historically, profit margins in the entire chemical industry are 5 to 6 percent. The petrochemical industry is considerably less than that; to obtain a 300 to 600 percent increase in petrochemical feedstock taxes would tax the chemical ethylene at 5 to 6 percent of its sales price, a level at which margins have never been achieved in our history—in our industry. In other words, these rates would essentially tax away any incentive to stay in business.

POINT NO. 2--THE FREE MARKET WILL NOT ALLOW PASSTHROUGH OF THE TAX

The legislation, current and proposed, is based on a "trickle down" theory; tax feedstocks and it will work its way through the system. It simply is not possible for producers to pass on the tax when the industry has substantial excess capacity.

In this business environment, market pressures, including foreign imports, will inevitably force domestic producers to absorb the costs of the tax.

POINT NO. 3—THE "DEEP POCKET" THEORY SIMPLY WILL NOT WORK

Only 12 companies are paying 70 percent of the current Superfund taxes. These same companies all have petrochemical operations that are 5 to 20 percent of their total assets. They are integrated, and they are profitable. However, I can assure you that the managements of these companies will not continue to operate units that generate significant losses. We have shut down petrochemical and derivative manufacturing operations when adverse market conditions have forced us to do so. This has resulted in a very significant reduction in personnel in our company.

POINT NO. 4—INCREASED TAX RATES ARE BASED ON ASSUMPTIONS THAT IGNORE THE GLOBAL NATURE OF THE PETROCHEMICAL INDUSTRY

This is a worldwide industry. Under the current and proposed legislation, imports are not taxed. We should treat our domestic capacity as a vital national asset. The technological position we have developed allows us to compete in international markets more cheaply than our competition.

We have an independent study which says that the advantage of U.S. production capacity would be eliminated. Shutdowns in U.S. capacity would occur, and we would assure that we would export more future production capacity as a result of a significantly increased feedstock tax.

Once again, the tax penalizes a narrow segment of the industry. Only 12 companies pay 70 percent; 3 companies, including my company, paid up to 25 percent of the Superfund petrochemical taxes collected. Moreover, only 2 chemicals out of the 42 listed raised 60 percent of the revenue, ethylene and propylene. The major supporters of that fund, and more than half the products made from them, are benign and nonhazardous.

If we are correct, an expanded fund based on feedstocks will substantially weaken the domestic petrochemical industry because the tax ignores supply and demand, import and export balances, and the ability of the U.S. industry to compete in a world chemical economy. We believe there are alternative funding proposals available.

To reiterate, we support the reauthorization of the fund to clean up abandoned dumpsites. We will also support expansion of the fund if it can be shown that adequate moneys are required to adequately address this problem and can be spent in a responsible way. We recommend to you today that Congress adopt, for the extension of the present fund or an expanded fund, a dedicated gross receipts tax on all businesses filing a U.S. Corporate Income Tax Form 1120, having in excess of $50 million of sales.

In addition, we recommend that Congress provide a direct economic incentive for proper hazardous waste management by imposing a tax on hazardous waste currently subject to the Resource Conservation and Recovery Act.

Taken together, the gross receipts tax and the waste end tax fully meet the five critera established for a workable Superfund tax. Revenues are guaranteed; the 8,200 businesses that would pay a gross receipts tax reported receipts of $3.2 trillion in 1980, a revenue base that's not likely to decline. Administration is simple; gross receipts are already reported on the corporate income tax form. Economic dislocation is minimal. A tax of $2 per $10,000 of gross receipts would raise $750 million annually, and exclusion of the first $50 million in gross receipts would protect small businesses. No one industry would be significantly impacted or adversely impacted in its ability to compete worldwide.

Equity would be maintained because both foreign and domestic companies would pay the tax equally, eliminating the advantage the current tax now gives to importers of untaxed chemical derivatives.

The waste end tax feature would provide a disincentive for land disposal.

We are unable to support a funding mechanism that will severely damage an industry that provides jobs and significant trade dollars to this country. We are unable to support a funding mechanism that places an extraordinary burden on just a narrow segment of our industry and a few companies. The problem belongs to the entire society; everyone has benefited, directly or indirectly, from the savings of the past improper practices. For this reason we believe Congress should consider a broader base for the Superfund.

Our proposal presented today offers such an approach. Thank you for your attention.

Senator STAFFORD. Thank you for a very good presentation.

We will now go to the other member of the panel, Mr. Robert Muth.

STATEMENT OF ROBERT MUTH, EXECUTIVE VICE PRESIDENT, ASARCO, INC., ACCOMPANIED BY JEFF SCHWARTZ AND MICHAEL VARNER

Mr. MUTH. Thank you, Senator Stafford.

I have with me today Mr. Jeff Schwartz, who is a consultant to ASARCO on a number of environmental matters, and Mr. Michael Varner. Mr. Varner holds an advanced degree in environmental engineering and heads the ASARCO Department of Environmental Sciences.

With your permission, sir, I will read small portions of my statement and summarize the bulk of it.

We of course appreciate the invitation to appear. I should make clear that the views I am going to present are those of ASARCO. These views do not necessarily represent anyone else in our industry or the views of any trade association.

We're not quite as well known as ARCO and perhaps I should offer a word or two about ASARCO. We are a company engaged in the United States, and through associated companies in several other parts of the world, in the mining and processing of nonferrous metals and minerals. We produce primarily copper, lead, zinc, and silver and their associated byproducts.

Senator LAUTENBERG. Mr. Chairman, excuse me. Do we have the written statement here?

Mr. MUTH. Yes, sir, you do.

Senator LAUTENBERG. OK, thank you.

Mr. MUTH. I am proud to say, Mr. Chairman, that ASARCO was one of the few companies to support enactment of CERCLA in 1980. You recall at that time that there were many who sought to kill the bill late in the 96th Congress, and we were one of a handful of companies who actively opposed filibuster and urged the bill's enactment.

Senator STAFFORD. The Chair has a pretty vivid memory about who was for it and who was against it back at that point.

Mr. MUTH. We supported CERCLA for two reasons, basically. First, we were convinced that the problems that it sought to address were real; and second, we were convinced that, perhaps alone among the major pieces of environmental legislation, CERCLA was designed in such a way as not to place domestic industry at an unnecessary disadvantage.

Specifically, one reason that we could support CERCLA was that it relied upon a so-called "front end" tax, a tax which would apply to imported materials as well as to materials produced domestically.

Thus, CERCLA's funding mechanism seemed to recognize and respond to several major realities of modern industrial life that other environmental laws have ignored. These realities, which are of particular concern to the nonferrous metals industry, include the following:

We operate in a world market, with strong international competition, and prices determined not by us, but by trading on the London Metal Exchange and other commodity exchanges throughout the world;

Because we have no substantial control over the prices of our products, we cannot pass additional costs through to our customers. We are in this respect very much like the wheat farmer, and very unlike a regulated utility;

If additional costs are imposed on the domestic producers of metals, but not on our foreign competitors, we face two unenviable

prospects: Either we absorb these added costs ourselves or we avoid the costs by reducing or terminating production and withdrawing from contested markets;

Our industry is highly cyclical. Even now, after 2 years of general recovery in the economy, the metals industry generally remains severely depressed. We are in no position today to absorb increased costs. But even if these were good times, we would know that less good times, and possibly very poor times, lie ahead. It is during the poor times that the high-cost producer inevitably falls by the wayside;

Increased costs falling only on the domestic producer means increasing foreign penetration of domestic markets, loss of domestic production and of export business, loss of U.S. jobs, and more domestic mineral reserves becoming uneconomic to mine.

The conclusions to be drawn from these realities are simple. We must find ways to assure that the costs of environmental protection do not contribute to the crippling of this Nation's ability to produce competitively. If these costs can be structured in ways which will not undermine the international competitive position of domestic producers, then domestic industry will be more likely to support legitimate environmental cleanup legislation. If not, domestic industry will have no choice but to opt for survival. It is in this general context that I would like to address my remarks to the efforts to revise and extend Superfund.

One of the major issues to be considered in this legislative deliberation is whether to impose a so-called waste end tax. Despite the superficial appeal of this concept, we would urge you not to enact it into law.

First and foremost, a waste end tax necessarily undercuts the competitive position of domestic industry. Since it would apply only to waste generated and disposed of in the United States, only domestic producers would be subject to the tax. Foreign competitors would not have to pay. The result, inevitably, would be a reduction in domestic metals producers' already precarious ability to compete in the world market.

If a waste end tax were absolutely essential in order to raise the necessary funds for Superfund or to control future hazardous waste generation, one could understand why the Congress would consider imposing it despite its effects on domestic production. However, such a tax is not at all necessary. Needed funds for Superfund purposes can be generated in any number of ways, one being a substantial broadening of the existing list of taxable chemicals and by a modest across-the-board increase in the rate of taxation. In this way, the necessary revenues can be raised without creating an excessive economic burden on any single sector of the domestic economy.

Mr. Chairman, there are a number of other points contained in my written statement concerning the waste end tax. While all of them are significant, I would like to emphasize four of these points. First of all, sir, where States have imposed waste end taxes to date, they have not produced the anticipated revenues. It is unclear just why this is, but there is nothing to indicate that a Federal waste end tax would fare significantly differently.

Second, there are a host of unanswered questions regarding the economic impact of the waste end tax on the many industrial sectors that would be impacted. Obviously, such a tax would have a differing impact depending, for example, on the value of the product the production of which gives rise to the waste. None of these matters has been assessed, as far as I know, certainly not outside the chemical industry. I think you are dealing with a proposal that will have many unanticipated and unintended economic effects. Before such a proposal is enacted, I would urge Congress to mandate a study of the likely economic impacts of waste end tax.

Third, there is no proof that the waste end tax will, in fact, reduce waste generation. Certainly in the mining industry, we have no real alternative to current land disposal practices. If mines are to operate, they must produce large volumes of waste, and that waste must be disposed of on land. There is no other feasible alternative. The same is true of other wastes from the mining process including smelter slag. A waste end tax can raise our costs, perhaps to the breaking point, but it can't change what we do with the great mass of our wastes.

Finally, the current system of front end taxes under CERCLA has worked. It has been shown to be a reliable and efficient approach for raising the necessary cleanup funds. There is no proof that it has failed in any way to serve the purposes of the act.

There are other concerns that we have under CERCLA. I am going to touch only very briefly on them. They illustrate once again our fundamental concern about the impact that this law has and that its reenactment in some forms potentially could have on domestic industries such as ours, which must compete in world markets.

The other side of the tax issue, Senator Stafford, is the question of liability. No matter how carefully one constructs a tax to avoid placing domestic manufacturers at a significant disadvantage with imports, similar concerns arise in the context of the rules of liability and cost recovery. That is not to say that responsible parties ought not to be required to respond. However, it does suggest, sir, that the rules of liability and of cost recovery should be fair; these rules should not overburden current production as a result of events which, in our industry, may have transpired as far back as the 19th century. There simply is too little connection between what has gone on over the past 100 or more years in the mining industry and those few firms that are survivors today in that industry to require that these few remaining firms bear the entire cost of cleanup of abandoned mine sites.

I would urge this committee in considering not only the tax question but also the liability question to keep in mind the need for domestic industry to remain competitive. We believe there are ways of meeting environmental objectives without unduly hindering domestic industry's ability to compete. We believe that the necessary cleanup funds can be raised. We believe that the objectives of the act can be served, and that all of this can be done without unfairly burdening domestic industry.

Thank you, Mr. Chairman.

Senator STAFFORD. Thank you very much, Mr. Muth.

As chairman, I am going to submit questions in writing to you both, if that is agreeable, in view of our time constraints. I am going to ask my colleagues if they will try to limit themselves to 5 minutes in the first round of questions.

I want to say that since I do remember the events of 1980 and who was on which side then that that will have nothing to do with how we come out in 1984. We would invite many more to join in trying to write an equitable bill this time. There is really no pending bill in front of this committee yet, although there have been some introduced in the House. Your testimony will be taken into consideration by the committee in whatever bill we produce on this side.

Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman.

I commend you both for making very effective statements. You both raised a matter that is of deep concern to me and I believe to all members of the committee, the effect of the tax on domestic companies with respect to their competitive position internationally. We have to try to deal with that, and we invite you both to participate further in that regard.

I have a few specific questions remaining.

Mr. Muth, in your statement you propose expanding the number of chemicals to be taxed. Would you please submit to the committee in writing those chemicals you propose to be included that are not now included?

Mr. MUTH. I would be delighted to do that.

Senator MITCHELL. Mr. Sorgenti, you said in your statement that feed stock taxes are 5 to 6 percent of your product price. In the guidelines, as I recollect the drafting in 1980, it was sought to limit the economic impact of the tax and, according to an EPA document which I have, it was intended that no tax rate be allowed to exceed safeguards against economic impact and inequities. In petrochemicals that was deemed to be 2 percent of the sales price or $20 per ton, whichever was less.

Would you provide specific documentation to this committee in support of your statement that it is now 5 to 6 percent? (See p. 518.)

Mr. SORGENTI. The 5 to 6 percent referred to the House bill which would significantly increase the feed stock tax and the fact that the price of ethylene used in computing that impact is far different than what it is on the market. The price of ethylene, which is one of the major supporters of this fund, has dropped from almost $0.30 per pound to about $0.18 or $0.19 per pound, Senator, so that the increase plus the price drop now raises that level to 5 to 6 percent.

Senator MITCHELL. So, if I understand what you are saying, under the existing law, you don't allege that the 2 percent guideline has been exceeded. What you are saying is that the combination of the firm price and if the proposed House legislation were passed, it would exceed that.

Mr. SORGENTI. That is correct.

Senator MITCHELL. All right. You also talk about, as does Mr. Muth, the problem of international competition and your inability to pass the tax on to consumers. I think that is a rather central

issue here because obviously, if you are able to do the latter, then the effect on the particular company or industry is not as significant as others. I would like to ask you to submit some specific details in support of your conclusion—you made a conclusory statement—that you are unable to pass on the tax to consumers.

Mr. SORGENTI. May I respond to that?

Senator MITCHELL. Yes.

Mr. SORGENTI. The facts are that the tax has not been able to be passed on. Less than 40 percent of it has been passed on by our company, so that is very specific, and we could provide detailed documentation of that.

Senator MITCHELL. That is what I would like to have. (See p. 518.)

Mr. SORGENTI. In addition, even if one could pass the tax on, it still would have a significant impact in two ways. First, there are substitutes to these materials available so that intercompetitiveness between products would have an impact downstream. Second, the current legislation and any proposed legislation that we have seen does not tax imports, and these products can be brought in from offshore.

Senator MITCHELL. I understand that, and we are going to try to deal with the latter point. On the former point, would you please provide specific information as to what the alternatives are that are not subject to the tax and any recommendation you have on how to deal with that?

Mr. SORGENTI. All right.

Senator MITCHELL. I don't want to take any more time. I have probably gone over my limit, Mr. Chairman. I thank you, both of you, and I will submit several additional questions in writing.

Senator STAFFORD. Thank you, Senator Mitchell.

Now that we have been joined by the chairman emeritus of the committee, our beloved friend, Senator Randolph, I am going to invite him to make whatever statement or ask whatever questions he might wish at this point.

Senator RANDOLPH. Thank you very much, Mr. Chairman. You speak of me so often in the past tense that I wonder if I am still around.

Senator STAFFORD. You are very much so.

Senator RANDOLPH. I am very grateful for the opportunity and the continuing commitment that we all share with you, the chairman of this committee. I only wish that sometimes our schedules permitted us to be at one place for a longer time, but with two or three committees and subcommittees moving, and also West Virginians are in town. I want you to know that. There are three groups here, and it is a joy to have them, of course. By the way, it doesn't mean anything, but I am the only Senator who has his telephone listed in the District of Columbia directory. That might have been a mistake.

Seriously, this question of how we raise the funding for an increased Superfund is certainly central to all of the testimony that is being given, and it is very helpful testimony. We must raise more money. I don't see how that can be avoided. However, we desire, certainly, that the tax be equitable. Members of the committee as well as those sitting at the witness table know that to be true or at least advisable, the equitable distribution of costs.

We could not certainly favor our international competitors. Isn't that correct? We wouldn't want to do that, would we?

Mr. MUTH. We hope not, Senator.

Senator RANDOLPH. We hope not, yes. Now, I am mindful, and I know my colleagues are, of what these industries are as identified with their States. In West Virginia, we have a very crucial, critical, vigorous petrochemical industry. They employ at the present time approximately 30,000 men and women. They are largely located on the Kanawha and the Ohio Rivers.

However, it does seem to me as I visit these plants, as I talk to the employees about their problems, that a broadening of the current feed stock approach—I am not sure that I am correct, but I think it is vital that that be done. You all have specific suggestions; we have been receiving those. Even though I haven't been present to hear all the testimony, I do know that these suggestions will go to the substances that could be added to a broadened tax base for feed stocks.

If any of you care to answer this question further, what is your suggestion or suggestions on what stage, if we call it a stage, or level or plateau to impose the tax to minimize the effects of what we call imported materials? I think this is a question that ought to come to any and all of you.

Mr. MUTH. Senator Randolph, I would like to attempt an answer to that question. In the case of nonferrous metals, on the one hand, I think there should not be a tax on any crude material that preceeds the refined metal. Nor should there be a tax on the metal content of any crude material such as ores or concentrates. It is only at the refined metal stage that the tax ought first to come into effect. Then, the tax ought to apply downstream, that is to say, to products made from previously untaxed metal, which are essentially imports, it should reach downstream to those products, those alloys, those mill shapes, the value of which resides largely in the metal.

That does not mean that you would attempt to tax the metal content of household furnishings or appliances or automobiles. It does mean that to assure that importers do not evade the tax by shipping in the metals as fabricated forms or shapes or in alloys, you would have to go beyond the refined metal stage to reach those imported products whose value is principally found in their metal content, for example, mill shapes. This approach would avoid double taxation of any domestically produced metal in its same cycle of production and use, but would assure that imported metals would be taxed equally.

I think there is a logical breaking point in order to protect domestic producers from untaxed imports. But the correct answer for the nonferrous metals industry might not be the correct answer for the chemical industry.

Senator RANDOLPH. Is there anyone else who would like to address himself or herself to the question that I have raised?

Mr. SORGENTI. I think moving downstream, Senator, might help some of the import problems by taxing derivatives. However, I don't think it would solve the problem of making the tax fair and equitable. I think the tax has to be broadened significantly beyond the chemical industry. I think every industry contributes to this

problem. I think you would get into the horrendous question of which materials should be taxed and at what rates they should be taxed.

I will give you as an example one of the derivatives of ethylene which bears a very substantial portion of this fund. It is the simple old trash bag that you use to put your trash in and that your facilities in West Virginia for Union Carbide and others have a strong participation in making. Those products are benign. So, moving downstream in derivatives doesn't make the tax more equitable. Trying to get the tax to the specific materials that are a problem is a problem as well.

That is why we propose a much more general tax that goes across 8,200 companies. Those 8,200 companies all participate in every industry and every industry has something to do with pollution. We think that that tax, because the level of it would be so low, would not provide any economic distortions and would broaden the tax and also capture imports. We really do feel that is the way to go.

Senator RANDOLPH. I thank the chairman.

Senator STAFFORD. Thank you very much, Senator Randolph.

Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

As I am sure both the witnesses know, New Jersey has a very significant petrochemical industry. They are a very important factor in our State. We like having them there. We want to try to be fair as we make these assessments that we first start off by cleaning up the environment and, second, that at the same time, we try as much as we can to protect those jobs and those investments that we have in our State and our society.

Mr. Sorgenti, you talked about the problems of the industry, and I don't think they were unique problems in 1982. Industry was generally terrible in the year 1982. Lots of companies lost money, and I don't know whether your industry was particularly singled out. I wish we had the time just so I could explore a little bit further what occasioned those problems that you had. You said you are closer to breaking even, now.

I sense one thing, and I think both of you make persuasive cases, and that is that we have to deal with the import problem. We can't leave our industry exposed so that our companies pay and the materials that we import, despite what you said Mr. Muth, to carry the total burden domestically. I think we have to take a very good look at that, as my distinguished colleagues have both said.

The problem that I have is trying to spread this cost—you talk about this gross receipts tax—8,200 companies. These are companies that somehow or other are generators? Is that the definition?

Mr. SORGENTI. No. These are simply companies that have over $50 million of gross receipts. These are all companies in America that gross over $50 million.

Senator LAUTENBERG. I see. So, Mr. Sorgenti, you don't feel that the expense for this—I heard your statement about everybody participating in pollution, but I think at some point there has to be an incentive for those who do start it to bear the larger share of the burden.

Mr. SORGENTI. We agree with you wholeheartedly, and that is why we say the combination, Senator, of our gross receipts tax and the waste tax as an incentive to eliminate waste so that this problem does not perpetuate itself we believe is the right combination. Remember, these funds are used to clean up sites where there is no identified person responsible. Where you are identified, you pay. Certainly, then, one would have to say that if there isn't anybody identified at a particular site, in fairness, a broad section of industry ought to pay for that.

Senator LAUTENBERG. Let's go on. You said there was a question about whether the funding mechanism is adequate? Have you looked at the problem sufficiently to make a judgment on what size the Superfund ought to be?

Mr. SORGENTI. Of course, there are a lot of studies that have been done and EPA itself says that it will have something by December of this year on which to make a recommendation.

Senator LAUTENBERG. The Administrator here in this room did say that he didn't believe that the $3.2 billion, if it were simply doubled, would be sufficient to take care of the task. Their estimates go anywhere from $8 to $40 billion, depending on whose estimate you look at.

Mr. SORGENTI. I think $8 to $16 is one particular range. We think that additional funding is going to be necessary. We think the proposal that is on the floor in the House is excessive.

Senator LAUTENBERG. Funding is excessive? You are not talking about the mechanism; you are talking about the amount of funding?

Mr. SORGENTI. We don't agree with the mechanism at all.

Senator LAUTENBERG. I understood that.

Mr. SORGENTI. We think the quantity, the funding, is probably excessive for what is necessary and can be spent, and can be spent effectively. One aspect of it is the recovery side. EPA estimates that 30 percent of the funds can be recovered, and these recovery rates are increasing significantly. So, we think there is going to be more money coming from recovery than has currently been estimated and therefore the total fund needed from new revenue should be somewhat lower.

Senator LAUTENBERG. There is, I think it is fair to say, a consensus view that the funding that we are looking at, whether it is in the House bill or otherwise, certainly is at minimum levels if you talk about $9 billion or something like that. We are not waiting for the report to come out in December; we want to move on these things, and that is not your concern as much as it is ours.

Mr. Muth, you suggest that—do you see any room for any kind of a waste-end tax at all?

Mr. MUTH. Well, I suppose the answer to a question like that is always yes, it is theoretically possible but——

Senator LAUTENBERG. It doesn't have to be. You stuck pretty hard, I think.

Mr. MUTH. I am personally convinced that in practice a waste-end tax will be more trouble than it is worth. I think what a waste-end tax scheme does, first of all, is to raise the ante enormously on the classification of waste as hazardous. My experience tells me that what happens when the stakes are raised—is that the lawyers

get rich arguing about it—and we will spend a decade arguing in courts and in agencies over what is and is not hazardous, and at what concentrations. If you try to make distinctions between various wastes based on degreee of hazard, there will be arguments over, in what category a waste should fall. If you don't make distinctions, if all waste is taxed at the same rate, you could kill some industries while having a negligible impact on others, and it just wouldn't be fair.

I think a waste-end tax simply gets you into a maze that is unnecessary and is bound to have some negative effect on domestic industry.

Senator LAUTENBERG. I have run out of time, I know, but the collectibility argument, in my view, is not the argument that ought to be made. If there is a problem with collectibility, it is just like with taxes. I worry about creating an underground dumping system, also.

Thank you, Mr. Chairman.

Mr. MUTH. That, too, is certainly a valid concern.

Senator STAFFORD. Senator Evans?

Senator EVANS. Thank you, Mr. Chairman.

I think I was struck by both pieces of testimony, but they had something of the same thread through them that yes, there are hazardous substances and yes, we ought to clean it up and yes, somebody else ought to pay. In both cases, you used the competition from imports or foreign competition as the reasons. That is a difficulty, but I am just curious as to what you would suggest, Mr. Muth, if we obviously have foreign competition in a good many fields, especially those where the manufacturing process creates hazardous waste. Other countries may well choose to manufacture those goods without concern for environmental hazards or with little concern for environmental hazards. Do you suggest that in order to keep competitive with those foreign producers we should adopt that same view toward hazardous materials in this country?

Mr. MUTH. No, sir, I don't. I simply suggest that when those materials are imported into the United States, they should pay the tax as well as we.

Senator EVANS. I thoroughly agree with that. You have the other half of that. You still have, presumably, the problem of whatever costs are associated with hazardous wastes in this country with the manufacturing process making the price somewhat higher in your competition or in anyone's competition in the international market outside the United States.

Mr. MUTH. Senator, that certainly is true, and I think what you have pointed to is the distinction between those costs that must be imposed on domestic industry and those costs that need not be imposed. All I am suggesting is that we not unnecessarily burden domestic industry through a tax scheme that does not apply, or applies inadequately, to imports. Surely, to the extent that production in the United States with our environmental laws and values entails higher costs, I think we have crossed that bridge. Those costs have to be borne somehow.

Senator EVANS. Would it be helpful to ask for you to submit in writing any range of those costs which you believe are appropriate or necessary as opposed to those costs which you suggest need not

be applied, or has your testimony itself expressed your view of where we must apply whatever taxes are necessary?

Mr. MUTH. I don't think it is a question of amount, if that was your question, sir.

Senator EVANS. It is not amount; it is where.

Mr. MUTH. In general, I would say that those costs that are inevitably associated with the proper and environmentally sound disposal of waste in the United States have to be borne by domestic industry, but I think one can draw a very clear distinction between that and imposing a tax which is a discretionary matter. The form of the tax is discretionary as well as the amount and the purposes for which it may be used. Congress can charge tax on the waste or not. I would suggest, in those circumstances, major consideration should be given to the competitive problems that American industry faces. Whatever tax mechanism is selected should be structured to minimize these problems, or at least not make them worse.

Mr. SORGENTI. Senator, may I comment on that?

Senator EVANS. Surely.

Mr. SORGENTI. First of all, under our proposal, the taxes that our company would pay would not change. They would not go down because we would be based on gross receipts.

Second, I do not believe that it was Congress' intention to have 12 companies pay 70 percent of the total bill for cleaning up waste sites in this country. That is, in fact, what we have and that is, in fact, what has been proposed to be continued in the House. So, I urge you to do two things: First, to consider legislation which would broaden the base of taxation and, second, to ensure that the tax also includes those imported products sold in this country so that we do not export jobs. Those are the two key things. We don't debate that additional funds are necessary.

Senator EVANS. Let me follow up on that. I don't disagree at all. I doubt that anyone on this committee or probably anyone in Congress would disagree with the rationale of applying whatever levy or taxation that we choose to apply on domestic industries to any imports. I think you are absolutely correct in that respect, and I am sure that we can move in that direction.

You mentioned in your testimony talking about at least one substance the potential of substitute materials and the inability to pass along increased taxation. I think it was ethylene you mentioned which has gone from $0.30 to $0.18. Could you be a little more explicit in what are the historic cycles in that particular product as to price? Is $0.18 particularly low or $0.30 unusually high? How frequently do you run into cycles?

Mr. SORGENTI. It is very much related to what happens to the raw materials and crude oil so that part of the reason the material went from $0.30 to $0.18 was the decrease in the price of crude oil. The price actually went down a greater percentage than the price of crude oil has gone down, resulting in almost a total elimination of margins in that industry.

That came about, Senator, by the fact that there was not only overcapacity in the United States, but there are plants coming on in the Middle East running on raw materials which are being put into it at minimal cost. So, the combination of the decrease in price of crude oil plus the pressure of overcapacity in the United States

and the pressure of imports from Canada, Mexico, and Saudi Arabia has eroded the margins and decreased the price.

Senator EVANS. Is that particular product manufactured in the United States sold anywhere overseas or is that confined to domestic consumption?

Mr. SORGENTI. Senator, a substantial part of that product is exported to other countries around the world. It is used for a very broad variety of products. For instance, one thing I can tell you that we know of in our company before we went out of the business was cable coatings for the telecommunications industry. The product ultimately winds up there. We were able to export that to Europe, Japan, and elsewhere.

Senator EVANS. Let me just go to your concern over substitute materials. It seems to me that there are two conditions on substitute materials. Either the substitute material is hazardous itself, or I suppose there is a possibility that you might find substitute materials which in themselves are nonhazardous. If it is hazardous, I think it probably makes good sense that it should be subject to the same kind of taxation so that you wouldn't run into that problem in terms of competition. However, if it is nonhazardous, maybe you ought to think about using an alternative that is not hazardous. Doesn't that make sense?

Mr. SORGENTI. Senator, about half the total amount of money collected is collected from two materials, ethylene and propylene, most of which produce products that are benign, such as the trash bag example that I gave. So, we are already in that situation. Simply put, taxing feed stocks and expecting it to trickle through the system so that ultimately the pollutant gets taxed, just has not worked and that is not where the money coming into superfund is coming from. That situation ought to be looked at carefully to see that we are providing an incentive to produce materials such as you have just stated which are nontoxic. Until you tax the chemical that is toxic in some way, you are not going to produce an incentive for developing new materials which are nontoxic or less toxic. Taxing feed stocks offers no incentive whatsoever for that. The manufacturer of a product that is toxic does not pay the tax. Many, many companies in our industry have paid zero dollars into superfund, and 12 companies have paid 70 percent.

So, I couldn't agree with you more. I would like to see a tax that taxes the materials that are hazardous.

Senator EVANS. Mr. Chairman, thank you. I would just suggest that I will have one question to you, Mr. Sorgenti, in terms of the proposed waste products taxed. I think there is a very real concern as to whether a waste-products tax would increase the problems we already have of midnight dumping and people avoiding paying a tax by simply despoiling the material and creating more hazardous and uncontrolled sites than we have today. I will ask about that so you can submit it in writing.

Senator STAFFORD. Thank you, Senator Evans.

Senator Burdick.

Senator BURDICK. Thank you, Mr. Chairman.

We seem to have a pro and con situation here on the panel. I would like a little more light. In Mr. Muth's testimony, he says that: "Proponents of the waste-end tax have failed to demonstrate

how the waste-end tax would create incentives which cannot be created as well or better by properly structured RCRA regulations."

Would you like to elaborate on that and tell me something about the regulations that would be better?

Mr. MUTH. Well, sir, it is simply a general point to be made here, and I think it was apparent in the question that Senator Evans asked. It is a question of what you are trying to accomplish and how much you ought to try to accomplish through a taxing scheme.

Theoretically, one can set out to do a great many things with a tax and to achieve, in effect, regulatory objectives by means of a tax. I think the experience is that a Tax Code can become enormously complex when Congress tries to use a tax as a regulatory mechanism. I would simply suggest that to date we have in this country as a general rule looked to regulation to assure environmental values. I believe, in the long run, that is the simpler and more direct way. I think it has, in general, worked, and I think resort to a waste-end tax is going to be far more complex than it might appear starting out.

Senator BURDICK. The testimony shows that several States have tried to collect on waste-end taxes and have been disappointed at the amount of money raised. Do you have any explanation why these small amounts cannot be raised and why there is so little collected?

Mr. SORGENTI. I would like to ask my associate, Mr. Kovall, to address that.

Mr. KOVALL. For the record, my name is Gary Kovall, Senator.

To begin with, a lot of the experiences of States that have implemented a waste tax are really an outgrowth of the early stages in which their RCRA programs were in place at that particular time. The State of California has a superfund, for example, which is totally funded by waste-end tax, a waste-end tax which taxes all industries in the State of California under varying tax rates. I would like to suggest that that tax experience has been a very positive one in the State of California. The revenues raised are totally consistent with the objectives of the tax and the definitions that the legislature there sought to impose when it enacted that tax.

One of the things which will be required before a Federal waste tax will be successful is to ensure that the RCRA system, which we suggest be taxed, have loopholes closed. For example, waste which is managed and disposed of onsite, on the site at which it is generated, will need better recordkeeping. This Congress is going to have to impose better recordkeeping requirements before a tax will be successful.

However, a lot of the reason that we suggest that a waste tax is a good idea really springs out of a report that was prepared for this Congress last spring by the Office of Technology Assessment. They found in that report—it had to do with management alternatives to land disposal of waste—I can't recall the exact title—but what they found in that report is that there is a current unfortunate lack of linkage between RCRA, the administrative program, and CERCLA, the economic incentives that could perhaps be imposed by CERCLA.

Among many things that they looked at insofar as alternative recommendations to the Congress was the waste-end tax. They also recommended keeping it at a level where it would not perhaps present the spectre of midnight dumping or create an economic incentive for violating the law.

We do support the findings in that report, and we think the experience in California has been a very positive one. We think it can work at the Federal level with some changes in RCRA.

Mr. MUTH. If I might, Senator Burdick, there is a more recent report, dated May 4, 1984, prepared by the General Accounting Office. The report discusses the experiences in New York, New Hampshire, and California with waste-end taxes similar to those proposed at the Federal level on waste. The GAO found that the three States have not collected the revenues that they anticipated, have not determined that the tax achieved its objective of encouraging more desirable waste-management practices, and were concerned that a similar Federal tax might reduce State tax revenue or increase the incentive to illegally dispose of hazardous waste.

Senator BURDICK. Is there a surrebuttal?

Mr. KOVALL. I am aware of the GAO report and that is currently being looked at at OTA. There are reports going back and forth on this issue. I would again suggest that the reason that the revenues that were anticipated were not raised was the fault of the waste-management administrative system and not the tax. You need a good recordkeeping system before you impose a tax on top of it, and we suggest that that can and should be done by the Congress.

Senator BURDICK. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Burdick.

Senator Symms.

Senator SYMMS. Thank you, Mr. Chairman.

For the good of the audience, is it the Chair's intention to go through the rest of the panel this morning?

Senator STAFFORD. Yes, it is.

Senator SYMMS. I appreciate what I have heard here from both witnesses and my colleagues. I think that is a concern. I would just say very briefly that we had a major problem in trying to handle $155 million a year. What would it be if it is $750 million? I think that is a concern, and maybe you think you have some recommendations.

However, I will submit some questions in writing, Mr. Chairman, and let you move ahead. You are going to be here all afternoon at this rate.

Senator STAFFORD. Thank you very much, Senator Symms.

Gentlemen, thank you both for helping this committee with its deliberations.

In the light of our time situation and in order to try to complete today and not ask anybody to come back later, the Chair is going to ask the members who would be testifying singly if they would mind doing so in two panels: Mr. Fitzpatrick, Mr. Bowes, Mr. Bauer, Mr. Teller, and Mr. Fortuna in the first panel, if that is agreeable. Then, we will have Mr. McGrath, Mr. Thomas, and Mr. Lawson in the final panel.

Gentlemen, I apologize again for the time compression that we are under. I must ask you to complete your statements within 5 minutes. Your full statements will be made part of the record.

We will go in the order in which I have called your names which means Mr. Fitzpatrick to be followed by Mr. Bowes.

STATEMENT OF JOHN J. FITZPATRICK, JR., WASHINGTON COUNSEL, GULF OIL CORP., ON BEHALF OF THE AMERICAN PETROLEUM INSTITUTE, ACCOMPANIED BY STEPHEN E. WILLIAMS, COUNSEL'S OFFICE

Mr. FITZPATRICK. Thank you, Mr. Chairman.

We do have a full statement which we have boiled down to four pages. My name, for the record, is John J. Fitzpatrick. I am Washington counsel for Gulf Oil Corp. With me is Stephen E. Williams, counsel to the American Petroleum Institute, on whose behalf we are testifying today. API represents 235 companies and 6,000 individuals. We appreciate this opportunity to present our views on the subject of compensation for hazardous substance-related disease and specific aspects of the broader Superfund legislation.

Should these hearings result in new proposed legislation, we would like to testify on that legislation.

We would like to say, Senator, that we are not opposed to reauthorization. However, we see no compelling argument for passage of reauthorization this year. First, we note that the proposed taxes in the reauthorization bills we have seen to date do not become operative until fiscal year 1986.

Moreover, we do not believe Congress should deviate from the orderly authorization process which it wisely included in CERCLA when the statute was enacted in 1980. This orderly process called for the creation of three special-information-generating programs. The first of these reports was section 301(e), a study of legal remedies which has been completed. The second program, section 104(i) was designed to document the possible relationship between the exposure to toxic substances and disease, a program which is now being implemented. The section 301(a) report to assess the current operation and future needs of the CERCLA program is a report which must be completed by the President by the end of this year.

The remainder of our comments will focus primarily on one aspect of proposed reauthorization legislation. There are currently proposals to add private remedies for personal injury or property damage to the Superfund law in the form of a fund and/or a Federal cause of action. Our purpose is a positive one, and we have therefore asked ourselves questions about the need for, the cost of, and the complexity of causation which give rise to grave reservations about these proposals, which we have set out in detail in our written testimony.

First, we see no evidence of a widespread public health problem necessitating a Federal remedy.

Our concern with funds center on the presumptions of a causal relationship between exposure and disease without scientific evidence to justify those presumptions, and our research indicates that compensation funds have always suffered from unchecked increases in costs far beyond anything anticipated when Congress

acted. Today, we are submitting the results of two analyses on this subject, one on the Black Lung Program and one on the Longshoremen's and Harbor Workers' Act. Costs will be even more unpredictable given the scientific uncertainty about health effects from a wide range of exposure to hazardous substances. This scientific causation uncertainty is described in detail in our testimony, references, and attachments.

There has been no need shown for a new Federal cause of action. There is still no evidence of a lack of a cause of action or a forum for these private claims in the States. This was also the unanimous conclusion of the first report I referred to, the section 301(e) study report. A Federal cause of action would be duplicative or in conflict with State law and unnecessarily burdensome to the Federal judiciary.

Just briefly, Mr. Chairman, concerning other specific Superfund issues, voluntary cleanup would be encouraged if liability standards were changed to specifically allow apportionment of costs. Relative to cleanup standards, the national contingency plan now effectively deals with spills of hazardous substances on a site-specific basis, and API believes that general guidelines are more appropriate than legislation which mandates specific cleanup standards.

Thank you, Mr. Chairman. When you are ready, we will be happy to respond to your questions.

Senator STAFFORD. Thank you, Mr. Fitzpatrick.

As a long-time holder of a Gulf credit card, I hope I am not in a conflict of interest position here.

Mr. FITZPATRICK. Sir, I would hold on to that. That is going to be an historical artifact in a few months.

Senator STAFFORD. Mr. Bowes, you are next.

STATEMENT OF DONALD J. BOWES, MANAGER, LEGISLATED COMPENSATION PROGRAMS, CONSOLIDATED COAL CO., ON BEHALF OF THE AMERICAN MINING CONGRESS

Mr. BOWES. Thank you, Senator. My name is Don Bowes. I will, with your permission, also extract from my prepared remarks.

I am appearing today on behalf of the American Mining Congress, the AMC. AMC is an industry association that encompasses producers of most of American's metals, coal, and industrial and agricultural minerals, as well as engineering and financial institutions and manufacturers that serve the mining industry. AMC appreciates the opportunity to share with the committee some of our industry's concerns regarding the reauthorization of the CERCLA.

I would like to emphasize two major points to the committee. First, the mining industry is prepared and willing to work with Congress and the administration to develop an effective means of addressing problems that have arisen out of past mining activities.

Second, the nature, volume, and toxicity of mining and mineral processing wastes differ significantly from wastes generated by other industries. These factors, as well as others, create special problems and consequences for addressing abandoned mine sites and mining wastes under CERCLA. These differences need to be taken into account in any legislation to amend CERCLA. To do otherwise would result in serious, inequitable impacts on a domestic

minerals industry already faced with economic problems of major proportions.

For the record, AMC wishes to note that there have been expressions of concern in the past that the mining industry has not paid its fair share of Superfund taxes. Some parties have even been under the mistaken impression that the mining industry has paid no taxes. The fact is that the mining industry has, since April 1, 1981, paid Superfund taxes. Our industry's contributions, by our own unofficial calculations, appear proportional to the number of mining related sites currently on the national priorities list, or about 4 percent.

Also, we want to assure members of this committee that the mining industry can and does recognize the realities and the very real pressures that argue for CERCLA reauthorization. It would appear that additional sites will eventually be listed on the NPL, and that other sites will require emergency cleanup or removal actions. These pressures are compounded by an apparent inadequacy of the current CERCLA funding mechanism to supply money needed for all sites on the NPL as well as future site requirements.

However, notwithstanding these pressures, some of the revenue raising methods proposed are of great concern to the domestic minerals industry. I would like just to emphasize the points made earlier by Mr. Muth of ASARCO and raise two basic concerns on behalf of the industry.

First, it is likely that any expanded list of taxable commodities and rates for a front end tax will, if invoked, pose a further economic burden on an industry already beset with serious problems.

Second, waste end tax provisions are of even greater concern due to the burden upon the domestic industry that would not apply to imports. Consider that the minerals industry produces enormous volumes of relatively innocuous waste due to the nature of mineral occurrence and processing, and, thus, a waste end tax upon mining and minerals would neither reduce waste generation nor discourage land disposal.

In the debate leading to the passage of CERCLA in 1980, Congress emphasized the need for cleaning up the problems associated with chemical waste disposal. Congress did not conclude that conventional mining and mineral processing wastes posed an equivalent potential danger to public health. In fact, Congress recognized the need for special consideration for mining and mineral wastes.

There are a number of significant differences between those wastes from mining and mineral operations and those of other industries, including the volumes of wastes generated, their stability and their degree of toxicity to life forms.

Mining and mineral processing generally utilize low grade ores which result in the production of large volumes of waste rock, overburden, slag, and tailings. Due to the presence of minor amounts of metals in the natural rock matrix, these wastes may sometimes be administratively classified as hazardous even though they exhibit little or no toxicity.

There are other industries that generate relatively small amounts of residuals that in themselves or by the presence of chemical contaminants are hazardous and may be extremely toxic in small amounts to human and other life forms. These are the re-

siduals that were the focus of Superfund, not mining and mineral processing wastes.

It is essential that any amendments to CERCLA reflect the differences between mining wastes and other wastes that present a substantially greater risk of toxicity. Although mining and mineral processing wastes are part of the overall environmental issue of prudent waste management, they are generally not significant in terms of relative impact on public health.

In addition to the concerns I have stated above, several other points should be considered in CERCLA amendments if gross inequities are to be avoided, and I will just identify one or two of those which are included in our prepared statement.

Senator STAFFORD. If you could summarize in about 1 minute.

Mr. BOWES. Yes, sir.

We are concerned about the inequity of the Mitre model as it is applied to mining. We are concerned about joint and several liability proposals. We are concerned that an apportionment of liability based on contribution also be put in the arsenal. We are, at this point, concerned about aspects of victim compensation. We feel that proposals to date have been very premature and should not be included, in any event, in CERCLA reauthorization. Finally, we would ask that the committee review and take recognition of the studies that are currently underway relative to mining aspects in terms of exemptions and in some of the RCRA actions that are going on.

This concludes my statement, Senator. Thank you.

Senator STAFFORD. Thank you very much indeed, Mr. Bowes.

The next witness will be Mr. Richard Bauer.

STATEMENT OF RICHARD BAUER, PRESIDENT, EASTERN ALLOYS, AND CHAIRMAN, WASHINGTON CONFERENCE FOR ZINC

Mr. BAUER. Thank you, Mr. Chairman. I, too, will summarize my paper.

I am Richard J. Bauer, president of Eastern Alloys, Maybrook, NY, and also chairman of the Washington Conference for Zinc, Inc.

The Washington Conference for Zinc grew out of a meeting in Washington recently concerning the Superfund reauthorization legislation. Attending the meeting were many segments of the zinc industry, including U.S. and foreign producers, independent zinc alloyers, trading companies, and hot dip galvanizers. The industry was briefed by both House and Senate staff personnel on the inclusion of zinc in both the feed stock and waste end provisions of the Superfund reauthorization bill being considered by a committee of the House.

The Washington Conference for Zinc realizes the importance of the cleanup of hazardous waste sites. However, we ask the Senate Committee on Environment and Public Works to accomplish its purpose without sweeping in an industry that is currently recovering from economic setbacks and has not been involved in generating toxic or hazardous waste through either the use of its raw material, slab zinc, or the production of its product, zinc alloy.

Although zinc has been named in the Clean Water Act and, by reference, in the Resource Conservation and Recovery Act, the Safe

Drinking Water Act, and the Comprehensive Environmental Response, Compensation and Liability Act, it is important to look at the context of the limited inclusions before labeling all zinc as hazardous in the Superfund reauthorization.

The Clean Water Act provides for a listing of hazardous substances and toxic pollutants. Under section 311 of the Clean Water Act, EPA has regulated discharge of hazardous substances into navigable waters and has named only certain compounds of zinc as hazardous.

Zinc is also listed as No. 128 of 129 toxic pollutants under section 307 of the Clean Water Act for the purpose of regulating effluent discharges.

The ambient water quality criteria document for zinc published by EPA in 1980 states that the toxicological data base for evaluating water quality criteria for zinc is inadequate. While there is no evidence that zinc is carcinogenic, there is a lack of usable data on chronic effects. The document also says, "The presence of zinc in drinking water contributes to the recommended daily allowance for this essential metal for man."

Furthermore, under the Safe Drinking Water Act, the primary drinking water standards intended by Congress for the protection of public health do not include zinc. Secondary drinking water, for example, odor, taste, et cetera, are not mandatory, and here zinc is included with iron, sulfates, chlorides, and others. However, zinc carries a much higher acceptable level in these standards than iron.

There is strong evidence that Congress, in earlier deliberations on environmental legislation, did not consider all zinc toxic and environmentally hazardous. Additionally, the labeling of all zinc as a hazardous substance for purposes of Superfund reauthorization, without considering Congress' intent with respect to this metal in earlier legislation, could have severe economic consequences for the zinc industry in the United States.

The Washington Conference for Zinc recognizes that this committee may add other metals to Superfund to broaden the tax base and raise additional monies for cleanup of hazardous waste sites. However, before doing so, we ask you to consider the detrimental effects on the zinc industry of declaring zinc a hazardous substance.

The zinc industry has had a difficult time in the past decade, and its recovery is tenuous. The mining and refining of zinc has declined in the U.S. over the past decade while it has increased in the rest of the world. United States mine production of zinc has fallen dramatically since 1970, largely because of declining ore quality and a substantial reduction in domestic refining capacity.

The addition of a $14.94 per ton tax on zinc, like the one proposed in H.R. 5640, may prevent the zinc industry from realizing a successful recovery. It may mean more revenues for the cleanup of hazardous waste sites. However, it may force further reliance on plastic, a more toxic and hazardous substance, as a substitute material. Heavy reliance upon zinc imports in the United States already adds a 1.7 percent ad valorem duty on zinc's market position.

Congress has not, in prior environmental legislation, concluded that zinc is environmentally hazardous. There is no justification for altering that congressional judgment and intent. Zinc, except for

some specific zinc compounds, was excluded from the 1980 Superfund Act and should be excluded again.

Zinc has no known adverse physiological effects upon man except at very high concentrations, according to McKee and Wolf. In fact, zinc is an essential mineral for the growth and development of all life from microorganisms to man. Man's estimated daily intake of zinc is about 10 to 15 mg, close to the U.S.-recommended daily allowance of 15 mg.

Zinc is naturally present in water in concentrations well below the current drinking water standard of 5 mg per liter, according to an EPA study of 1980. From 1942 to 1962, the limit had been 15 mg per liter, but it was lowered because the taste threshold for zinc in drinking water occurs at 5 mg per liter. It would appear, then, that the current 5 mg per liter limit is conservative insofar as physiological effects are concerned.

The numerous academic studies conducted on the toxicity of zinc are based on widely variant assumptions and data. In the case of zinc's toxicity to fish, the solubility, and toxicity of zinc is greatly influenced by the pH, alkalinity, hardness, and temperature of the water in which zinc is found. The influence of each of these factors also greatly varies with different test fish. Therefore, any statement comparing the toxicity of zinc with another metal or with a chemical must take all of these factors into careful consideration. Furthermore, the amounts of zinc added to water samples under test conditions were considered to be extreme overdoses.

Mr. Chairman, in closing, I would just like to reference a recent national television ad that one of the major drug companies is running. They show a scale where gold is on one side, and what is more important to man than gold, and it is zinc. It is in your daily intake of vitamins.

I rest my case.

Senator STAFFORD. I must have felt good this morning because I had quite a lot of zinc yesterday.

The next witness will be Mr. Teller.

STATEMENT OF JOSEPH P. TELLER, MANAGER OF SPECIAL PROJECTS, GULF COAST WASTE DISPOSAL AUTHORITY

Mr. TELLER. Mr. Chairman, my name is Joe Teller. I am deputy general manager of the Gulf Coast Waste Disposal Authority in Houston, TX. I am here today as vice president of the National Association of Local Governments on Hazardous Wastes. This organization is composed of a national cross-section of large and small cities, counties, and other local entities joining together in response to a pressing need for local governments to take a strong and active role in hazardous waste management policy issues.

You have my written comments. I will cut through them to get to some of what we think are important points.

We support the program established by Superfund and strongly recommend reauthorization of Superfund for an additional 4 years. When Congress enacted this landmark legislation in 1980, the scope and extent of the national hazardous waste problem suggested that an exclusively Federal and State regulatory approach would satisfy the concerns of the public and address existing

threats. We believe that experience since 1980 suggests that Congress should reconsider this policy and provide a much stronger role for local government. Mr. Chairman, it is the local official who wakes up to learn that a hazardous waste site is threatening his or her community, and it is the local official's constituency who are directed impacted by this threat. It is the local official's telephone which rings at 2 in the morning, and it is this local official who must take both the perceived and actual responsibility to take the appropriate first steps to mitigate the threat and protect the public health and welfare.

Of specific concern to us is the problem of a local unit of government inheriting a locally abandoned or bankrupt hazardous waste site. This can be an absolute disaster for a local government. Under RCRA, at least as it is interpreted by a large number of States, if a local government inherits hazardous wastes either by taking over an abandoned property or by finding and removing wastes which are illegally dumped on the street, that local government can be viewed by higher levels of governments as the responsible party or the generator, and can then be held liable by the State or Federal Government for cleanup of those wastes. Similar situations exist in the Superfund area both with regard to abandoned or bankrupt property as well as donated property that years later is determined to pose a serious hazardous waste threat to the local community.

To address these problems, it is imperative that Congress review both Superfund and RCRA to allow for a caretaker status for wastes which are found and removed by a local government acting to protect the public health and safety. This status should allow the locality to seek Superfund assistance for both emergency and nonemergency situations where wastes have been dumped on public property or where wastes have been abandoned on private property by bankrupt corporations and where the local government subsequently forecloses on that property and takes title to it due to nonpayment of property taxes. Rather than requiring a local government to have a generator identification number as if it were a waste producer, a separate status code, such as a caretaker identification number, would still allow the cleanup to take place and to fit within the manifest system. This approach would not create the unfair liability question currently faced by all local governments. I offer the interest and services of our association in assisting you.

We will be ready to answer whatever questions you may have.

Senator STAFFORD. Thank you very much. We appreciate your testimony.

Next, we will hear from Mr. Rich Fortuna.

STATEMENT OF RICHARD C. FORTUNA, EXECUTIVE DIRECTOR, HAZARDOUS WASTE TREATMENT COUNCIL

Mr. FORTUNA. Thank you, Mr. Chairman. My name is Richard Fortuna. I am executive director of the Hazardous Waste Treatment Council. The Treatment Council is a national association of firms with a common commitment to the primary treatment and the restricted use of land disposal facilities. It is the largest organization representing the interests of these firms.

The council does support the reauthorization of the Superfund. We believe it is at least another 10-year task ahead of us.

At the same time, however, the council firmly believes that the future success of failure of the Superfund Program, at this point, rests not so much with Superfund itself, but with the regulatory program under RCRA and the legislation currently pending before the Senate to close those loopholes. We certainly appreciate the efforts of yourself and Senators Randolph, Chafee, Lautenberg, and Mitchell yesterday in urging Senator Baker to put this on the schedule before the beginning of the summer recess.

It is clear that the current RCRA interim status sites are going to be the primary contributors to Superfund sites of the future. Some of my own discussions with State officials have yielded the fact that the closure rate for when permit call-ins occur is around 40 to 60 percent. Our discussion with Lee Thomas earlier this week confirmed that he is experiencing the same type of rate when they are calling in permits.

The only situation that I think could parallel the potential harm and short sightedness of the current RCRA loopholes would be for the Superfund Program to sanction cleanups that will need to be revisited because of the short-term nature of the cleanups. This, however, is precisely the situation that the Council members have identified as the most disturbing aspect of the Superfund Program to date.

I would like to just go through one example from our testimony, to which I have appended an article from the Chicago Tribune of March 24 which details what happened at a "Superfund cleanup" at the Bell Pole and Lumber site in New Brighton, MN. At this particular site there was a number of rather large volume of dioxin-containing wood chips through pentachlorophenol contamination that were to be shipped to a scrap metal recycler in the city of Chicago to be recycled. This recycling entailed the burning of these wood chips, obviously at a low temperature. After the burning of the soil, it was to be sold as fill material. This was to be done at an approximate cost of $40 per yard. You can barely get solid waste disposal for $40 a yard, let alone the Superfund cleanup.

If this had occurred, if these dioxin woodchips had been burned at low temperatures, it probably would have precipitated a greater hazard than was present in the woodchips to begin with because low-temperature burning yields greater levels of dioxin than you would have otherwise.

Aside from the administrative questions that are raised as to who is minding the store in Minnesota and Illinois, and the RCRA loopholes that are illustrated by this particular sitation, it is abundantly clear from this example that current cleanups are so biased in favor of the cost side of the cost-effectiveness equation of the balancing test, so that alternative methods are not even being considered, and when they are considered, they are not being chosen.

The irony is that there is a licensed PCB incinerator in the city of Chicago not more than 10 miles from where these dioxin woodchips were taken. There are any number of mobile units that could have been brought onto the site as well to accomplish a similar level of destruction efficiency. They were never even contacted.

The Council has several recommendations with respect to the balancing test language of section 104 of the statute. We believe that the cost effectiveness evaluations conducted under section 104 should reflect long-term rather than merely short-term cost considerations and that the policy contained in RCRA ought to be referenced in Superfund relative to the use of land disposal as a method of last resort. Third, we ought to include criteria specifying that treatment is the preferred option where it will yield a significant and permanent decrease in either waste volume, hazard, or mobility.

Turning to the issue of how clean is clean, this issue, I think, by nature is limited to the extent and specificity with which any statutory appraoch can address it. Our suggestion, however, would be to embrace an approach which would establish an essentially rebuttable presumption against the use of existing standards where they apply. Indeed, from our survey, there are few Superfund situations where an existing standard under the Water Act, the drinking water standards, the Clean Air Act, or other environmental statutes could not be used as essentially a starting point for deliberation for establishing cleanup levels.

Turning to the postclosure liability trust fund, the Council membership is concerned with the current structure and concept of this provision. Essentially the more attractive and rapid liability transfer to the federally backed fund, the more attractive land disposal will become. The Council's recommendation at this point is that the structure of the fund be modified to extend the periods of time before which liability could transfer and extend the periods of time under which the existing owner-operator maintains his original liability for his site.

The last issue I would like to raise is the waste based fee system. There has been quite a bit of discussion this morning on the panel from other witnesses on this particular aspect. Originally the Council also had a diversity of positions on this issue. After all, we are the ostensible beneficiaries, the people who do treatment, something other than land disposal.

However, it is our view at this point that essentially coincides with that of the earlier witnesses from ASARCO and ARCO that the prospects and the promise of such a system far outweigh the actual benefit, or the problems outweigh the promise. The shortcomings have already been identified by previous withesses, but I would like to identify one other one that has not been touched on earlier.

Any such waste based fee system, by its very nature, is going to reference the current definition of hazardous waste under RCRA. I would just not for the committee that on April 4 of last year, EPA proposed significant revisions to the redefinition of solid waste which would essentially define a broad range of waste activities on the site of the generator as not constituting hazardous waste management. If one is concerned about reliability of funds coming into the Superfund, certainly if you are defining a broad range of activities out of the system, you are going to significantly undercut your fee collection.

Our recommendations would be to increase the rates of Superfund on the current feed stocks. Our second recommendation would

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be to include additional waste streams, such as metals, asbestos, coal tar, creosote, other sorts of things that are currently not taxed. I have submitted with the testimony a study that has been done for us by Hart & Associates which has identified approximately 15 additional contaminants found in groundwater at Superfund sites that are not currently taxed. I think these additional feed stocks or wastes could serve for some additional revenue for Superfund.

Lastely, we recommend that the committee examine expanding the level of Federal commitment from the current 12.5 percent to perhaps on the order of 25 percent.

Thank you very much, Mr. Chairman.

Senator STAFFORD. Thank you very much, Mr. Fortuna.

Thank you all. Undoubtedly, there will be some questions submitted to you in writing if that is agreeable, and we would ask that you respond at your earliest convenience if you can do so. For the committee, thank you very much, indeed, for joining us this morning.

The last three witnesses this morning will be Mr. Jerome McGrath, Mr. Larry Thomas, and Mr. Louis Lawson. Gentlemen, we will go in the order in which I called your names, if that is agreeable. Again, I apologize for the time constraints we find ourselves in. We have your statements which will all be placed in the record. Mr. McGrath, you are first. Mr. McGrath is president of Interstate Natural Gas Association of America.

STATEMENT OF JEROME J. McGRATH, PRESIDENT, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Mr. McGRATH. Mr. Chairman, I am president of the Interstate Natural Gas Association of America which is a nonprofit national trade association representing the interstate natural gas transmission industry. We commend the committee for its efforts to complete an early reauthorization of Superfund and the amendments to the Superfund law.

My purpose in appearing before you today is to emphasize the importance of retaining intact the provisions of the current law that relate to natural gas and also to comment on the suggestion of some that an underground storage tank program be included in the Superfund.

When Congress, and more specifically this committee, was drafting the Superfund proposals in 1980, there was an understandable desire to define the term "hazardous substance" as broadly as possible. The broad language of section 102(a) of the act led to concern that natural gas could mistakenly be classified as a "hazardous substance" not because it poses any environmental threat, but because natural gas is flammable and, as such, may pose a safety threat when released accidentally.

To avoid any possible confusion or misinterpretation, specific language was added to the definition of hazardous substance excluding natural gas from the act's coverage. I would also note that a corresponding exemption for natural gas was inserted in the definition of pollutant and contaminant in section 104 of the act.

It is important to the gas industry that this exemption language be retained in the Superfund. Natural gas is not a pollutant and poses no environmental threat. It is not now considered to be hazardous by any other environmental statute, and an entire regulatory framework exists to ensure the safe operation of our pipeline systems administered by the Department of Transportation pursuant to the Natural Gas Pipeline Safety Act.

Finally, we are aware of no incident that has occurred that would cause any question to be raised concerning the legitimacy of the existing language.

For all these reasons, the exclusionary language now contained in the Superfund definitions of hazardous substance and pollutant or contaminant should be retained.

Similarly, the revenue provisions of the current law make it clear that methane, which is the major ingredient of natural gas, is only to be subject to the chemical tax when used otherwise than as a fuel. This provision makes clear that because the use of natural gas as a fuel is unrelated to any environmental threat, such uses should not be taxed. In keeping with the purpose of the taxing structure, methane is taxed when used otherwise than as a fuel, that is, for feed stock purposes.

I would also like to comment on the proposals to establish an underground storage tank program as part of the Superfund. Superfund legislation being considered in the House contains such a provision, and I understand that this issue may be considered by this committee as well.

INGAA does not oppose proposals to regulate underground storage tanks containing substances which, when released, may contaminate groundwater supplies or otherwise do serious damage to the environment. We are deeply concerned, however, that substances which do not pose a threat of groundwater or other contamination might inappropriately become subject to this regulation. To avoid this possibility, we suggest that in defining those substances to be covered, a distinction be made between those hydrocarbons that are liquid at standard conditions of temperature and pressure and could conceivably pose some threat of pollution as opposed to those which are gaseous and pose no pollution threat.

We are also concerned that the term underground storage tank might be defined so broadly as to include natural gas pipeline facilities or, more specifically, those parts of pipelines where liquid condensate is collected. These so-called drip collectors are small collection vessels that are a physical part of the pipeline and thus are regulated pursuant to the Pipeline Safety Act.

Recent formulations of underground storage tank proposals have excluded from the definition of underground storage tank pipeline facilities regulated pursuant to the Natural Gas Pipeline Safety Act, and we support that language.

In conclusion, Mr. Chairman, INGAA believes that when the Superfund reauthorization moves forward, provisions affecting natural gas should remain as in current law. Further, if an underground storage tank program is adopted, it should exempt pipeline facilities already regulated under the Natural Gas Pipeline Safety Act, and it should clearly limit the scope of the program to only those substances which pose an actual environmental threat.

We thank you, sir, for your time.

Senator STAFFORD. Thank you very much, Mr. McGrath.

Now, we would be pleased to hear from you, Mr. Thomas. Mr. Thomas is executive director of National Paint and Coatings Association.

STATEMENT OF LARRY L. THOMAS, EXECUTIVE DIRECTOR, NATIONAL PAINT AND COATINGS ASSOCIATION, ACCOMPANIED BY THOMAS J. GRAVES, AND TIMOTHY L. HARKER

Mr. THOMAS. Thank you, Mr. Chairman. We represent over 800 paint manufacturing companies, the majority of which are small of mid-sized concerns having under $5 million in annual sales. Over 100 of these companies are already involved in site cleanup action.

On my left is Mr. Thomas Graves, NPCA's assistant general counsel. On my right is Mr. Timothy Harker, former Assistant General Counsel of EPA and presently a partner with the law firm of Kadison, Pfaelzer. Both have extensive experience concerning Superfund enforcement.

On the 16th of this month, we appeared before the Subcommittee on Water Resources of the House Public Works and Transportation Committee concerning the recently introduced Superfund reauthorization bill, H.R. 5640.

We concentrated on an amendment to the liability standard. The amendment would require the imposition of strict joint and several liability as construed by the courts and their application of section 311 of the Clean Water Act. I will quickly summarize our written statement on this matter which has been submitted to your committee, and then would be happy to answer any questions you might have.

Let me begin by saying that if all the responsible parties who had contributed to hazardous waste sites over the years were engaged in unlawful activity or gross misconduct, the perhaps there would be some justification to proceed on the inflexible basis of strict joint and several liability. However, these parties, for the most part, disposed of their wastes in a legal, acceptable manner for the time. To impose rigid joint and several liability against them in unfair, since many are already paying the tax for cleanup in the first place. But the Government is enforcing Superfund right now as though joint and several were in the law.

Let me give you just one, telling example. Some 130 companies have been identified as hazardous waste generators at two related waste sites in the Midwest and 12 are paint manufacturers. An industry group, representing 65 percent of the generators, including paint companies, offered to clean up site 2, reimburse EPA for one-half the cost of site 1 cleanup and take additional actions which would have represented over 85 percent of the entire cleanup for both sites. The Justice Department, on behalf of EPA, rejected this offer in January and sued 9, and only 9, of the 130 generators for total cleanup costs, even though the Government had quantified all the alleged parties' wastes.

To correct this inequitable situation, the Superfund liability standard should be modified to permit generators who legally disposed of their wastes to pay their fair share toward cleanup, and

only their fair share. H.R. 5640 would instead institutionalize the kind of inequities in Superfund enforcement by explicitly mandating the standard of liability to be strict joint and several as construed in section 311 of the Clean Water Act. We believe this is entirely unsuitable to Superfund situations and flies in the face of recent Federal case law on the subject.

Section 311 of the Clean Water Act has been interpreted by some courts to require joint and several liability, but these cases normally only involve two or three parties. Superfund cases typically involve dozens and, as I had mentioned, sometimes hundreds of parties. Also, section 311 spills often pose a truly indivisible problem, but drums and other wastes situated at a problem waste site lend themselves to apportioned responsibility.

Courts have recognized that the type of imposition of joint and several liability allowed in the context of section 311 of the Clean Water Act may not be appropriate to Superfund situations. I draw your attention to two leading cases, the *Chem-Dyne* case and the *United States* v. *A & F Materials Co., Inc.,* and make the following points:

First, the term joint and several liability was deleted from Superfund to avoid a mandatory legislative standard for all situations which might produce inequitable results in some cases. Second, a blanket adoption of the joint and several liability standard of section 311 would be inconsistent with the legislative history of Superfund. Most important, third, both Houses of Congress were concerned about the issue of fairness, and joint and several liability is extremely harsh and unfair if it is imposed on a defendant who contributed only a small amount of waste to a site.

In recognition of this unfairness, we recommend a liability provision which explicitly calls for joint and several standard be modified to allow a contributor to prove his fair share contribution and be held accountable to the limit of that amount. Reference to section 311 will not accomplish this objective. In fact, the liability language of H.R. 5640 clarifies nothing. It merely codifies existing rigid EPA enforcement policy which delays cleanup, depletes administrative resources, and produces inequitable judgments.

Senator STAFFORD. Would you summarize now?

Mr. THOMAS. Yes, Senator.

In summary, our request for a legislative amendment is designed to clarify serious ambiguity in the current law. In short, it should be made clear, and our amendment would do so, that if any responsible parties come forward on a voluntary basis, they will be held liable for only their fair share of the cleanup costs. Then, we believe, Congress will have fostered an understandable, constructive, and cooperative effort between business and Government which we think is essential to get this job done.

Thank you.

Senator STAFFORD. Thank you very much.

Finally, we will hear from you, Mr. Lawson. Mr. Lawson is fuels division manager and research coordinator at Solite Corp. in Richmond, VA.

STATEMENT OF LOUIS LAWSON, FUELS DIVISION MANAGER AND RESEARCH COORDINATOR, SOLITE CORP.

Mr. LAWSON. I thank you, Mr. Chairman.

This is a very unfortunate position to be in, because I know everybody is thinking about their next priority, whether it is the restroom, or lunch, or a martini, and I am one of those persons, too. I am also very much aware of the problems that Mr. Moore is going through, because I have been in charge of conducting public hearings for the Government on a number of occasions. Therefore, my summary will take less than 30 seconds.

I would like just to call your attention and would like to work with Mr. Moore when you get to developing legislation on an energy-recovery exemption which I think is self-evident. For example, we are very energy intensive as an industry, as is cement, glass, steel, and a number of other industries. They are using what is categorized as hazardous waste for fuel. We meet, in our processes, the destruction efficiencies required by RCRA and would urge that such an exemption be built in if you develop your waste-end tax.

In our company, for example, we have burned 77 million gallons of hazardous wastes in the last few years. This is equivalent to 75 million gallons of petroleum or 310,000 tons of coal, which I think is quite significant. Other industries using very high energy intensive processes like ourselves have done the same.

My purpose in being here is just to call your attention to what we thought was self-evident, although it did not get included in the House bill, and we are trying to correct that.

I thank you very much for your attention.

Senator STAFFORD. Thank you, Mr. Lawson. I think for the brevity of your summation, we will make you an honorary northern New Englander.

Mr. LAWSON. Thank you, Mr. Chairman.

Senator STAFFORD. I want to express my appreciation for the committee to all of you for being here. My apologies for the trying circumstances this morning which found us trying to do 2 days' work in 1 day. We don't like to do that. We not only compress your time too much, but I lose the members of the committee who need to hear what you have to say probably at least as much as I do. Today, however, it was unavoidable, and I regret it. We would like to submit some questions to you in writing, if we may. My thanks from the committee for your understanding and your being with us this morning.

The committee stands adjourned.

[Whereupon, at 1 p.m., the committee recessed, to reconvene at the call of the Chair.]

[Statements submitted for the record follow:]

STATEMENT OF

DR. LAWRENCE J. KORB
ASSISTANT SECRETARY OF DEFENSE
(MANPOWER, INSTALLATIONS AND LOGISTICS)

INTRODUCTION

Good morning, Mr. Chairman and members of the Committee. It is an honor and a pleasure to appear before you to review the progress the Department of Defense (DoD) has made in our environmental protection programs in the last three years. I am accompanied today by Peter Daley, Director of Environmental Policy for the Department.

In my testimony this morning, I will place the total DoD environmental program in perspective, and then focus on a new program, the Defense Environmental Restoration Program, which was established in Fiscal Year 1984.

DEFENSE ENVIRONMENTAL PROGRAM SCOPE

The Department of Defense's environmental program includes three principal areas: pollution abatement, natural resources management, and pest management. The pollution abatement area focuses on compliance with all federal environmental laws and regulations as well as on waste stream reduction. To place DoD's pollution abatement activities in perspective, during the past decade we have spent about $1.5 billion on water and air pollution abatement. Our goal is 100% compliance as soon as possible.

We manage 24 million acres of land for many compatible uses. Our goal is to conserve and protect these lands while simultaneously obtaining maximum economic use of the lands for the taxpayer. All installations have natural resources management plans which integrate complementary land uses

compatible with our military mission. During the past two years, we have increased policy guidance and program monitoring aimed at prolonging and diversifying our use of public lands. We are good neighbors. However, we request no specific appropriation to accomplish these goals. Instead, we finance our needs from sales of forest products, hunting and fishing fees, and agricultural outleases. In Fiscal Year 1983, from sales of forest products alone, we distributed $1.9 million to host states and deposited $2.8 million in the Treasury. We collected $15 million in cash and services from agriculture outleases, and about $1.5 million in outdoor recreation user fees. All of these proceeds are spent in maintaining and improving natural resources management on DoD lands. We coordinate our natural resources plans with appropriate federal and state agencies.

The Pest Management Program protects DoD personnel from disease and our property from damage. We apply the best available scientific technology to the challenge of monitoring disease vectors all over the world, and protecting about $350 billion worth of facilities and stored products from pest damage. We are leaders in this area. Our Armed Forces Pest Management Board and Aerial Spray Flight are high-value national resources. Board meetings are regularly attended by Department of Agriculture, Environmental Protection Agency (EPA), and Department of Health and Human Services people. The work of the Pest Management Board and Defense health professionals is responsible for our leading position in the assessment and control of indoor air pollution problems due to the termiticide, chlordane, and other pesticides.

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

Let me now turn to the Defense Environmental Restoration program, which is a 1984 expansion of the environmental cleanup program we began in 1975. Congress appropriated $150 million for the program in 1984. This boosted our 1983 environmental cleanup and hazardous waste management programs by 400% and allowed us not only to accelerate our work but also to add two new elements: formerly-used site cleanup, and a research and study component. The language of the Fiscal Year 1984 Appropriations Act expedited our program significantly by giving us a first clear charter to conduct work on formerly-used lands.

In the six months since the Act was passed, we have completely reviewed our requirements for environmental cleanup. As a result we have requested a substantial increase in the Fiscal Year 1985 budget to accelerate further the program and follow up the formerly-used site initiative begun this year.

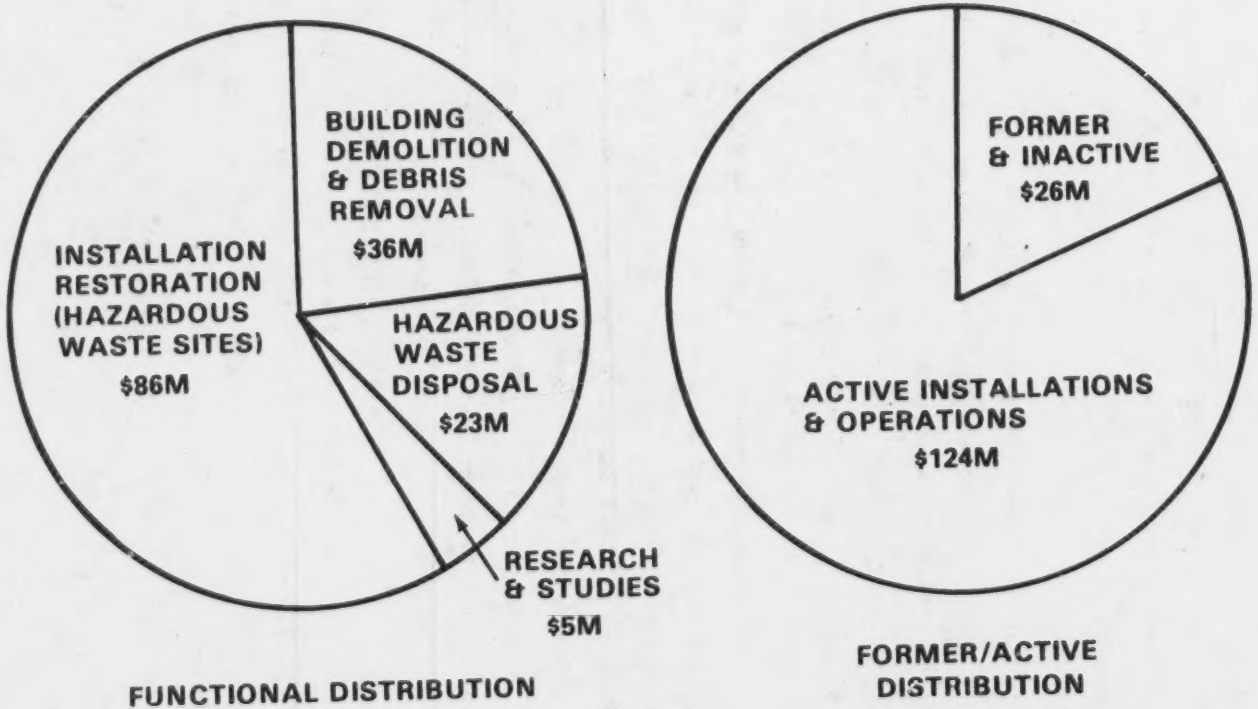
Let me now review the program's four elements and our plans to carry out the work they encompass. Figure 1 shows how we are spending the $150 million appropriation in Fiscal Year 1984.

A. Installation Restoration

The first of the four elements is the Installation Restoration Program. This is the Department's program to identify and correct problems with past improper hazardous waste disposal sites on our own lands and bases. It is the DoD counterpart to the national Superfund program.

Figure 1

FY 1984 DEFENSE ENVIRONMENTAL RESTORATION



Under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), commonly known as "Superfund," federal agencies are not eligible to spend Superfund dollars on their own problems. We have been funding cleanups from our operations and maintenance or procurement appropriations. In Fiscal Year 1983, we spent $23 million in investigations, engineering studies, and cleanups or other remedial actions. In Fiscal Year 1984, under the augmented Environmental Restoration appropriation, we will be spending $86 million.

The Cornhusker Army Ammunition Plant in Nebraska is a good example of how we operate in this area. The Army completed a comprehensive records search and groundwater monitoring at the Plant. Small concentrations of waste chemicals were discovered in drinking water wells in a suburb of nearby Grand Island, Nebraska. The Army notified federal, state and local health authorities, and offered bottled water supplies to about 85 families. All this was accomplished within a few weeks after we identified the contamination problem. The Army is now developing a permanent solution. This is a good example of how we're using restoration funds to solve quickly contamination problems.

We are working closely with EPA to assure our Installation Restoration Program is consistent with their approach in Superfund. EPA is presently evaluating a number of our bases for possible inclusion on the Superfund National Priorities List (NPL). Putting DoD sites on the list will not make us eligible for Superfund monies, but it will place our sites in national perspective. On the basis of what we know now, probably 40 to 50 DoD sites will eventually be placed on the NPL. We believe that

as many as 400 sites on 200 DoD installations may eventually require some form of remedial action. This compares with a recent EPA estimate that there may be over 17,000 potential sites nationwide requiring investigation and/or remedial action.

The Installation Restoration Program is designed to focus on the actual problem sites. We have a four-phase approach for screening our installations. Phase I is assessment of all potential sites. It includes a detailed records search, interviews with key employees, including some retired employees. In 1980, we established a goal to complete these assessments by the end of Fiscal Year 1985. As shown in Appendix A, we are now over 90% of the way toward achieving that goal. At the conclusion of Phase I, we publish a report and decide whether to stop or to proceed to Phase II. Phase II is a physical survey at potential problem sites. It typically includes placement of monitoring wells, sampling and chemical analysis, and other field work. The purpose of Phase II is to define the nature and extent of any contamination problems. As Appendix A shows, DoD has started about 140 Phase IIs and completed 41. When Phase II is finished, we publish our findings in a report.

Both Phase I and Phase II reports are made available for review by EPA and State environmental agencies. The Phase II work may conclude there is no need for remedial action, or that some remedial action is required. Normally, this decision is made with EPA and State input. We have made Phase III technology development an optional step. It comes into play if cleanup technology doesn't exist or if new standards need to be developed.

Phase IV is the actual remedial measures; it includes project design, construction, and operations. Our goal in DoD is to have all construction required for cleanups completed by 1993. This is ambitious, since some complex problems don't present obvious solutions. Based on what we know now, we believe the Installation Restoration Program will require on the order of $1.5 billion. Appendix B shows our estimated rate of expenditures. With continued Congressional support, we will make the 1993 goal.

About two-thirds of the Fiscal Year 1985 Environmental Restoration Program request would be spent for Installation Restoration. While this is a large percentage, we believe it is appropriate to assure continued progress in addressing a priority issue in the national interest.

B. Building Demolition and Debris Removal

The second element of the Environmental Restoration Program is almost entirely new, and was added by Congress in the 1984 Defense Appropriations Act. It includes removal of unsafe, unsightly, and dangerous buildings and structures, and other debris from active installations, inactive installations, and lands which were formerly used by DoD. While we have been working for over five years to clean up a few selected inactive sites, we had no comprehensive plan to identify and eliminate problems. This was partly because of lack of authority to spend money on lands which we do not control.

The appropriation will help us clean up a wide variety of former sites. For example, at the West Virginia Ordnance Works,

now a state wildlife refuge (McClintic Wildlife Area), we will be removing chemical contamination. The State of West Virginia has listed this site as their top priority site on the Superfund National Priorities List. Another example is quick action taken by the Air Force in cooperation with EPA to respond to groundwater contamination apparently caused by past Air Force actions at the former Olmsted Air Force Base, Pennsylvania. The Air Force is using the appropriation to fund monitoring studies and a permanent alternate water supply to 12 families whose wells have been affected.

We have assigned the Army to manage the formerly-used sites program because of their recognized expertise and ability to manage complex construction projects, and their presence in virtually every state. These were selected on the basis of clear DoD responsibility and their feasibility for correction. There will be cases where the military services choose to retain responsibility for remedial action for its former sites.

In order to deal with formerly-used sites comprehensively and fairly, we have solicited nominations of candidate sites from each state governor through the National Governors' Association, from EPA, and other federal agencies. The Department of the Interior (DoI) has been especially helpful. Over 100 DoI sites are now being studied by the Corps. We anticipated the formerly-used site restoration work will continue for several more years.

C. Hazardous Waste Disposal

The third element of the program is hazardous waste disposal. This is aimed at the environmentally safe transportation, storage, treatment, and disposal of hazardous wastes which are currently being generated by DoD activities. We are investing in things that will assure safe handling of hazardous materials. It is clear that our top priority concern must be to avoid mishandling. Even an apparently small accident can cost a million dollars to clean up. For example, at Fort Lewis, Washington, last November, an unknown person dumped a few hundred gallons of PCBs on our land resulting in the contamination of 1,850 tons of soil. We cleaned up the mess in eight days, but it cost us nearly half a million dollars.

Under the federal Resources Conservation and Recovery Act, DoD must assure that our operations and contracts for treatment or disposal conform to the new, tighter hazardous waste regulations.

We have taken two significant steps to improve our level of confidence that this is done. First, DoD assigned to the Defense Logistics Agency (DLA) the world-wide disposal mission for DoD hazardous waste. This insures a high level of centralized expertise and consistent, uniform execution of our policies. Second, using Environmental Restoration funds, we have streamlined our contract procedures and focused contract administration on compliance. While no system can guarantee perfection, we are increasing contractor surveillance and are working with other law enforcement and criminal investigative agencies, including EPA's National Enforcement Investigations

Center (NEIC), Denver, Colorado, to detect abuses. NEIC reviews all of DLA's hazardous waste disposal contracts and selectively checks contractor performance. For example, in April 1984, a DLA hazardous waste contractor, Chess Hester Trucking Company, Russellville, Alabama, was indicted by a federal grand jury for making false claims to the government in connection with a hazardous waste disposal contract. The Defense Criminal Investigative Service (the investigative arm of the DoD Inspector General) has made deterrence of improper hazardous waste disposal a high priority enforcement item.

The Defense Environmental Restoration appropriation in Fiscal Year 1984 includes $23 million for hazardous waste disposal. Most of this goes directly to DLA for disposal of waste generated by the military services.

In Fiscal Year 1985, we expect to spend about $29 million for this area. We need this amount to do the job effectively and to assure ourselves that it is being done right.

D. Research and Studies

The fourth and final element encompasses a number of initiatives to improve our long-range program management and reduce the probability that we will need to clean up sites as a result of today's activities. It is the smallest element, accounting for less than two percent of the appropriation in Fiscal Year 1984. But the potential pay-off is huge. We are investing about $5 million into finding ways to reduce the amount of hazardous wastes that we are generating on our military bases. This work can easily pay for itself many times over. We will

save money by avoiding a disposal bill and by re-using materials such as solvents. We plan to greatly increase our solvent recycling by 1986. This will reduce the total DoD waste stream by about one-fourth. The biggest pay-off will be in minimizing our future potential liability associated with hazardous waste handling and, inevitably, mishandling. If we don't generate it, we won't mishandle it, dispose of it or pay to clean it up 20 years from now. We also won't be subject to the unknown future costs associated with damages people may suffer when exposed to hazardous wastes in the environment.

Second, we are funding research and development to find safer, cheaper, and more effective ways to clear lands of unexploded ordnance. The Department of the Interior has already identified over 4 million acres of their land which is contaminated with unexploded DoD ordnance. We have almost as much ordnance-contaminated land on our own rolls and could sell some of it if we could decontaminate it cost-effectively. We need to develop better technology, and with the Environmental Restoration Program, we have begun to do so. This last point is important because we are sharing technology for remote detection of buried materials with EPA. While we are primarily interested in finding buried shells and bombs, EPA needs to develop better techniques for locating buried drums.

To summarize our Environmental Restoration Program activities in Fiscal Year 1984, we are spending $150 million at 93 active installations, and at 41 formerly-used and inactive sites. The list of former and inactive sites is attached as

34-870 O - 84 - 27

Appendix C. Although not all of the specific formerly-used sites to be cleaned up in Fiscal Year 1985 have been determined, the process and rationale for evaluating them has been established by the Army Corps of Engineers, and they are working on it now.

The President's Fiscal Year 1985 original request to continue and expand the program was for $313.8 million. However, as part of the President's deficit reduction proposal, we have reluctantly agreed to reduce this amount to $234 million, along with other substantial defense program reductions. The reduced amount, nonetheless, is nearly 60% greater than our Fiscal Year 1984 program.

DEFENSE ENVIRONMENTAL LEADERSHIP PROJECT

I will turn now to three areas which contribute decisively to my confidence that DoD is meeting the new challenges of hazardous waste cleanup and environmental protection. Last summer, I established a two-year top-level project I call the Defense Environmental Leadership Project. We have formed a team of top environmental professionals with significant military experience to think through the best and most effective solutions to the major environmental problems facing DoD. That team is fully staffed and are working now to deal with some tough issues -- problems like groundwater protection, solvent recovery, regional hazardous waste treatment, hazardous waste storage construction criteria, environmental audits, and low-level radioactive waste disposal. I expect significant pay-off from the Leadership Project, and I look forward to their recommendations. They have already completed, with EPA

cooperation, comprehensive design criteria for hazardous waste storage facilities. These should help both us and EPA speed construction at the 174 new facilities we need.

DEPARTMENT OF DEFENSE-ENVIRONMENTAL PROTECTION AGENCY RELATIONS

During the past year, the communications between DoD and EPA have improved greatly. EPA has assigned a full-time liaison officer to my personal environmental staff. He is an experienced Senior Executive Service environmental professional, and he has been an enormous help to us. This complements our assignment of a liaison officer to EPA over 10 years ago.

Last August, Lee Thomas (Assistant EPA Administrator for Solid Waste and Emergency Response) and I signed a Memorandum of Understanding on CERCLA (attached as Appendix D). In December, our agencies signed an agreement establishing timetables for PCB disposal. This was needed because contracts for disposal had become backlogged. They are now on schedule.

Finally, EPA maintains oversight of DoD's environmental protection programs. EPA reviews our pollution abatement project requirements list and certifies their adequacy. We regularly provide EPA and interested parties a base-by-base status report on our Installation Restoration program. We share with EPA the technical details of our remedial action plans. We welcome EPA's oversight. We are committed to doing the cleanup job right, and EPA oversight is helping us fulfill that commitment.

In sum, DoD and EPA are cooperating to speed national environmental cleanup. I believe we should lead the effort together, and we will continue to work to assure we achieve compliance in the letter and the spirit of the law.

CONCLUSION

In conclusion, the Department of Defense has taken on a responsible leadership role in environmental matters. We are interested in finding and applying innovative technical and administrative solutions to environmental problems. Our substantial environmental program increases, augmented by the funds in the Defense Environmental Restoration Program appropriation, demonstrates our commitment.

We believe that the Congress has acted wisely to establish the Defense Environmental Restoration Program. We in DoD are pleased to play a leading role in the national effort; we are proud of what we have done already; and we enthusiastically accept the challenge to do more. We believe the benefits of DoD particiption go far beyond providing places where our people can live and work more productively but will benefit the quality of life for our neighbors and the whole nation.

I would be pleased to answer any questions you or other Members of the Committee may have.

DoD Installation Restoration Program Summary

(April 1984)

Phase I (Assessment):

	Required	Underway	Completed
Army	181	20	159
Navy/Marine Corps	97	22	45
Air Force	158	79	79
Defense Logistics Agency	24	0	24
Total	460	121	307

93% started; 67% completed

Phase II (Survey):

	Required	Underway	Completed
Army	50	18	27
Navy/Marine Corps	39	17	3
Air Force	79	65	5
Defense Logistics Agency	29	3	6
Total	197	103	41

73% started; 21% completed

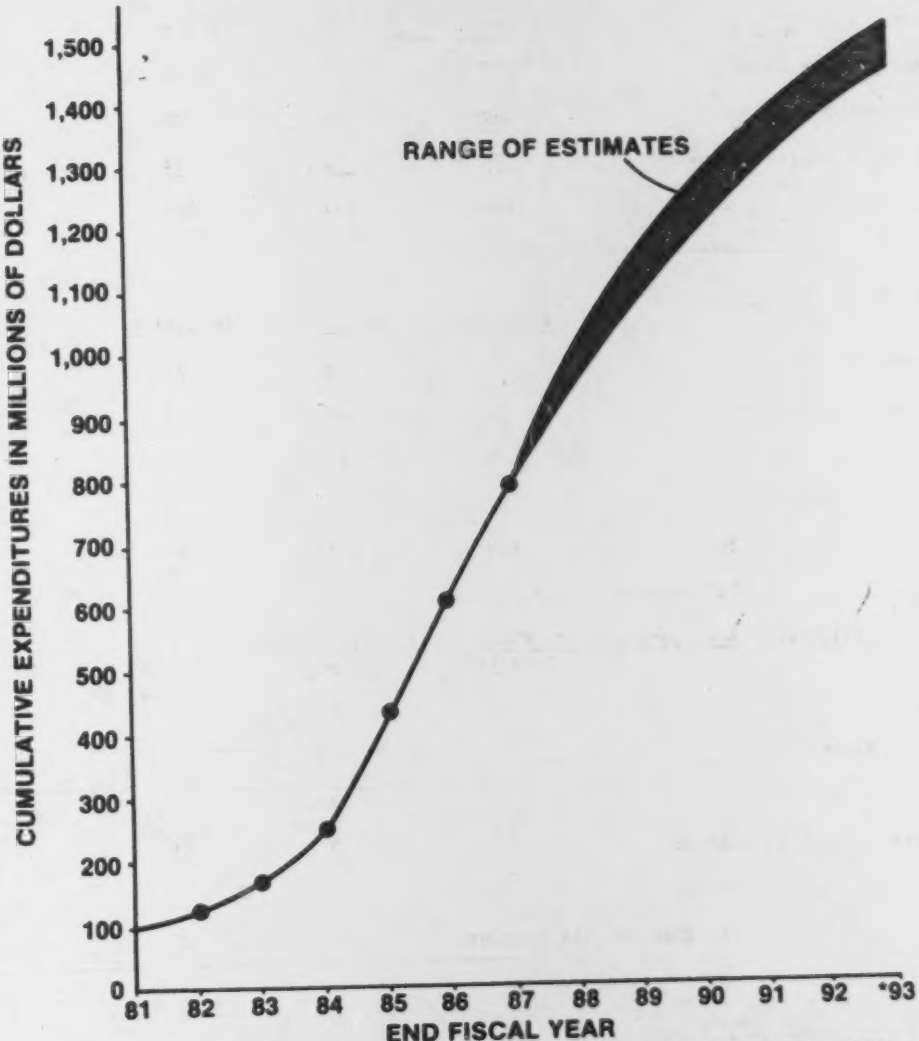
Phase III (Technology Development)/Phase IV (Remedial Action):

	Required	Underway	Completed
Army	18	5	4
Navy/Marine Corps	9	2	3
Air Force	16	9	0
Defense Logistics Agency	3	3	0
Total	46	19	7

57% started; 15% completed

Appendix A

DOD INSTALLATION RESTORATION PROGRAM — ESTIMATED COSTS
(AS OF MAY 1984)



*DOD GOAL FOR COMPLETION OF CONSTRUCTION IS 1993.

APPENDIX B

Defense Environmental Restoration Program
Formerly-Used and Inactive Sites
1984

1. West Virginia Ordnance Site, West Virginia
2. Olmsted Air Force Base, Pennsylvania
3. Suffolk County Airport, New York
4. Bedford Air Force Station, Virginia
5. Lewiston Air Force Station, Montana
6. White Alice Sites, Alaska
7. Atka Island, Alaska
8. Cold Bay, Alaska
9. Kodiak Island, Alaska
10. Lake Louise, Alaska
11. Port Clarence, Alaska
12. Prudhoe Bay, Alaska
13. Rohn River, Alaska
14. Tawah Creek, Alaska
15. Unalaska, Alaska

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE DEPARTMENT OF DEFENSE
AND
THE ENVIRONMENTAL PROTECTION AGENCY
FOR THE
IMPLEMENTATION OF P.L. 96-510
THE COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA)

1. PURPOSE

The Department of Defense (DOD) and the Environmental Protection Agency (EPA) are entering into this agreement to clarify each Agency's responsibilities and commitments for conducting and financing response actions authorized by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and specifically delegated by Executive Order 12316.

This agreement does not redelegate any responsibilities set out in Executive Order 12316. Rather, it clarifies respective operational roles, responsibilities, and procedures, consistent with the applicable provisions of Executive Order 12316 and Executive Order 12088. This agreement does not create any substantive or procedural rights in other parties, does not affect enforcement rights and remedies with regard to any party, and is intended only for Federal administrative purposes of EPA and DOD.

These responsibilities and procedures are guided by the following:

- DOD facilities are defined as government-owned, government-operated facilities controlled by DOD; and government-owned land controlled by DOD that is either contractor-operated or leased to other parties.
- DOD is generally responsible for financing actions taken in response to releases from DOD facilities, or assuring that another party finances such actions.
- DOD and EPA will conduct response actions consistent with response procedures established by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).
- At DOD's request and in its discretion, EPA will provide DOD with technical assistance to support the response actions conducted by DOD.
- Civil works activities of the Department of Army Corps of Engineers are not subject to the terms of this agreement.

DOD will consult with EPA concerning the best techniques and methods available for the prevention, control, and abatement of environmental pollution.

2. BASIS OF AGREEMENT

CERCLA provides a comprehensive framework for response to the release or potential release of hazardous substances, pollutants, and contaminants.

Section 104 of CERCLA and Executive Order 12316 place authority for responding to releases from DOD facilities with the Secretary of Defense. These response actions must be conducted in accordance with the NCP as amended by EPA under section 105 of CERCLA.

3. RESPONSIBILITIES AND RESPONSE PROCEDURES

For purposes of this agreement, releases of hazardous substances are divided into three categories:

- Releases from current DOD facilities;
- Releases from former DOD facilities; and
- Other releases for which DOD is a responsible party.

For each category, section 3 describes procedures to be followed by DOD and EPA in determining which Agency will conduct and/or finance the response action consistent with CERCLA, the requirements of Executive Order 12316, and the NCP. At DOD's request and in its discretion, EPA will provide technical assistance or serve in an advisory role when DOD conducts a response.

3.1 Releases from Current DOD Facilities

a. Current DOD facilities with on-facility contamination and no off-facility contamination

When there is contamination on a current DOD facility and no off-facility contamination, DOD will conduct and finance the response action or assure that another party does so. At DOD's request, EPA will provide technical assistance or serve in an advisory role. This section does not apply to releases for which DOD is not a responsible party under section 107(b) of CERCLA (e.g., "midnight dumping").

b. Current DOD facilities with off-facility contamination

When there is off-facility contamination and clear evidence that a current DOD facility is the sole source, DOD will conduct and finance the response action or assure that another party does so. At DOD's request, EPA will provide technical assistance to DOD or serve in an advisory role.

When there is off-facility contamination and no clear evidence that a DOD facility is the sole source, EPA will finance and conduct investigations and studies off-facility to determine the source and extent of the contamination and recommended response action. DOD will finance and conduct investigations and studies on the DOD facility to determine the source and extent of the contamination and the recommended response action. DOD and EPA will

coordinate these efforts and resulting decisions to minimize costs and duplication of activities, and will exchange all reports, studies, and other relevant site information.

If, after DOD and EPA review these investigations, it is determined that the current DOD facility is the sole source of the contamination, DOD will conduct and finance the response action or assure that another party does so and will reimburse EPA for costs EPA expended at the site.

If, after DOD and EPA review these investigations, it is determined that the current DOD facility is one of two or more sources of the contamination, EPA and DOD will jointly determine the most appropriate response and financing methods.

3.2 Releases From Former DOD Facilities

a. Releases from former DOD Facilities, when DOD is the sole responsible party

If EPA, in consultation with DOD, determines that a former DOD facility is the sole source of the contamination, DOD will finance any response action, including off-facility response actions, or will assure that another party does so. If EPA agrees, DOD may choose to conduct the response action. If EPA conducts the response action, DOD will reimburse the Hazardous Substance Response Trust Fund (Fund) for the action. EPA concurrence is required before DOD conducts a response action.

In cases where DOD disagrees with the determination of responsibility, proposed action, or its cost, DOD may use the dispute resolution section of this agreement.

b. Releases from former DOD facilities, when DOD is one of two or more responsible parties.

If EPA, in consultation with DOD, determines that DOD is one of two or more parties responsible for the contamination, EPA will conduct and finance the response action and EPA, in consultation with DOD, will determine the appropriate response costs. DOD will reimburse EPA that amount.

If EPA agrees, DOD may choose to conduct the response action. If EPA conducts the response action, DOD will reimburse the Fund for the action. EPA concurrence is required before DOD conducts a response action.

In cases where DOD disagrees with the determination of responsiblility, proposed action, or its cost, DOD may use the dispute resolution section of this agreement.

3.3 Other Releases for Which DOD is a Responsible Party

When there is a release for which DOD is a responsible party, and which does not involve a current or former DOD facility, EPA will investigate the need for a response action, and the extent of responsibility of different

parties for the release, including DOD's responsibility. EPA, in consultation with DOD, will determine the appropriate response costs and DOD will reimburse EPA that amount. If EPA agrees, DOD may choose to conduct the response action for the portion of the release for which it is responsible. EPA concurrence is required before DOD conducts a response action.

For releases from DOD vessels, including vessels owned or bareboat chartered and operated, DOD and EPA will jointly determine the most appropriate response.

In cases where DOD disagrees with the determination of responsibility, proposed action, or its cost, DOD may use the dispute resolution section of this agreement.

4. FUNDING OF RESPONSE

DOD will request sufficient funds in its budget to pay for response actions programmed by the Department under this agreement. DOD will ensure that projects in this budget program are listed in the same manner as other environmental projects under OMB Circular A-106.

When EPA undertakes a response for which DOD is responsible under CERCLA, DOD will reimburse the Fund for its share. Where funds are not immediately available for reimbursement, DOD's next fiscal year budget request will include a request for Fund reimbursement. Provisions of this agreement for payment by DOD shall not be construed as affecting the particular source of appropriations for payment by the government, including special appropriations or 31 U.S.C. 724a.

Any commitment of funds is subject to the availability of appropriations.

Each Agency will maintain records of all costs incurred which may involve payments to or from the Fund and will provide documentation of these costs at the other Agency's request.

5. COMMUNITY RELATIONS

When EPA undertakes a response action, EPA will be responsible for establishing a community relations program for the site, as specified in the Guidance for Implementing the Superfund Program (Part III, Section 4).

When DOD undertakes a response action, DOD will be responsible for providing information to the local community.

For EPA and DOD actions at the same site, EPA and DOD will conduct a joint community relations program.

6. EXCHANGE OF INFORMATION

DOD and EPA will exchange information on a regular basis. EPA and DOD will inform each other at the earliest possible stage of any evidence of contamination, types of contamination, and potential actions. EPA and DOD will

keep each other informed regarding the type and availability of data or information. Such data or information will be made available upon request, subject to Agency technical or peer review. Upon request and following Agency technical or peer review, DOD and EPA will submit drafts of specific technical reports to each other for review. Review comments will be addressed in final reports.

Agency technical or peer review will be expedited when information is requested. All requests for data or information will be responded to within ten working days of the request.

EPA and DOD will notify each other prior to providing the other Agency's information or data to another party. All confidential business information exchanged under this agreement is subject to procedures set forth at 40 CFR Part 2.

This section applies to information related to all releases under section 3 of this agreement, including releases under section 3.1.

7. RESOLUTION OF INTERAGENCY CONFLICTS

Any conflict arising under this agreement will be resolved at successive levels of Agency decisionmaking until agreement is reached. The EPA Regional Administrator and the Commanding Officer of the Defense Component Major Command in question will first attempt to resolve any disputes. Failing resolution, the EPA Assistant Administrator for Solid Waste and Emergency Response and the appropriate Military Department Assistant Secretary will attempt to reach agreement. If this is unsuccessful, the matter will be referred to the EPA Administrator and the Secretary of Defense.

The dispute resolution process is not a substitute for necessary and timely removal actions, and each Agency reserves rights otherwise provided by law to pursue any response or enforcement actions.

8. MULTIPARTY AGREEMENTS

Where appropriate, EPA Regional Offices and DOD installations may enter into agreements with State and local authorities regarding response actions. Such agreements must be consistent with this agreement, except that dispute resolution sections of such agreements may supersede section 7 of this MOU.

9. AMENDMENTS

This agreement may be amended at any time by mutual agreement of EPA and DOD. Amendments will be in writing, and will be signed by appropriate DOD and EPA officials.

10. PERIOD OF AGREEMENT

Unless ended or extended by mutual agreement, this MOU will continue in effect until December 1, 1985. This agreement may be terminated upon notifi-

cation by either DOD or EPA to the other party. A minimum of ninety days' advance written notice of termination is required.

11. EFFECTIVE DATE

This agreement will become effective upon signature of both parties.

LAWRENCE J. KORB
Assistant Secretary of Defense
(Manpower, Reserve Affairs and
Logistics)

Date: 8/12/83

LEE M. THOMAS
Assistant Administrator
Office of Solid Waste and Emergency
Response

Date: 8/12/83

May 23 hearing

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, DC 20301

MANPOWER
INSTALLATIONS
AND LOGISTICS

7 AUG 1984

The Honorable George J. Mitchell
United States Senate
Washington, DC 20510

Dear Senator Mitchell:

As stated in Dr. Korb's letter of June 21, 1984, answers to most of your questions of May 30, 1984 are enclosed. The state locations and the status; i.e., active or inactive, of the CERCLA 103 (c) sites remains to be provided. I will forward this information in approximately two weeks.

Sincerely,

Robert A. Stone
Deputy Assistant Secretary of Defense
(Installations)

Enclosure

cc: Senator Robert Stafford, Chairman
Committee on Environment and Public Works

Question 3: The Installation Restoration Program is divided into four phases. Phase I, the records search, is the preliminary identification of potential problems. Phase II consists of follow-on field work to determine the extent and magnitude of contaminant migration. Phase III consists of technology-based development to support the development of project plans for controlling migration or restoring the installation. Phase IV includes those efforts which are required to control identified hazardous conditions.

Please provide the committee with the following:

- a list of those installations in Phase I, and the date for each installation when Phase I commenced;
- a list of those installations in Phase II, and the dates for each installation when Phase I and Phase II commenced;
- a list of those installations in Phase III, and the dates for each installation when Phase I, Phase II and Phase II commenced;
- a list of those installations in Phase IV and the dates for each installation when Phase I, Phase II, Phase II, and Phase IV commenced;
- a list of those installations for which Phase IV has been completed and the dates of completion. In addition, for each installation, please provide the dates when Phase I, Phase II, Phase III, and Phase IV commenced.

Answer 3: The following lists provide the information requested. In some cases, installations are listed as being in Phase I or II, but dates are also provided for a Phase IV effort. This reflects an installation where a cleanup project was initiated to address one site, and an investigation in planned or underway to address any other sites which may exist at the installation.

	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final

INSTALLATION IN PHASE I

ARMY

Arlington Hall Station, VA	03/84
Cameron Station, VA	02/84
Fitzsimmons Army Medical Center, CO	03/84
Ft. Hamilton, NY	03/83
Ft. Kamehameha, HI	06/83
Ft. McNair, DC	02/84
Ft. Myer, VA	02/84
Ft. Richardson, AK	12/83
Ft. Shafter, HI	06/83
Ft. Totten, NY	03/83
Ft. Wadsworth, NY	03/83

	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
Kapalama Military Reservation, HI	06/83				
Kilauea Military Reservation, HI	06/81				
Makua Military Reservation, HI	06/83				
Mississippi AAP, MS	10/83				
Peason Ridge, LA	01/83				
Pohakula Training Area, HI	06/83				
Radford AAP, VA	11/80				
Red River Army Depot, TX	05/81				
Schofield Barracks, HI	06/83				
Stewart Annex, NY	04/84				
Tripler Army Hospital, HI	06/83				
Walter Reed Army Medical Center, DC	01/84				
West Point Military Reservation, NY	04/84				
NAVY					
MCAS Kadeohe Bay, HI	04/83				
NAVCAMS East PAC, HI	04/83				
NWS Yorktown, VA	04/83				
NAS Moffett Field, CA	07/83				
NSWC White Oak, MD	09/83				
NAVSTA Roosevelt Roads, PR	10/83				
San Juan Area Activities	10/83				
NSBA Sabana SECA, PR	10/83				
NUWES Keyport, FL	10/83				
NAS Whidbey Island, WA	10/83				
NIROP Magna, UT	10/83				
NSY Hunters Point, CA	11/83				
NWC China Lake, CA	11/83				
NAS Lemoore, CA	11/83				
MCB Camp Pendelton, CA	12/83				
NAS Miramar, CA	12/83				
NWS Seal Beach, CA	12/83				
NAB Little Creek, VA	01/84				
NAS Oceana, VA	01/84				
FCTC Dam Neck, VA	01/84				
SPCC Mechanicsburg, PA	01/84				
CBC Davisville, RI	01/84				
NAS Chase Field, TX	04/84				
CBC Gulfport, MS	04/84				
MCLB Albany, GA	04/84				
NAS Key West, FL	04/84				
NAS Whiting Field, FL	04/84				
NAS Cecil Field, FL	04/84				

	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
AIR FORCE					
Arnold AFB, TN	04/84				
Barter Island, AK	05/81				
Beale, CA	11/83				
Bellows AFS, HI	05/84				
Bullen Point, AK	05/81				
Cape Canaveral, FL	01/84				
Columbus, MI	02/84				
Gen B. Mitchell, MI	04/84				
GRT Pittsburg IAP, PA	05/84				
Hanscom, MA	01/84				
Hickam Pol Anx, HI	05/84				
Hurlburt Field, FL	02/82				
Kaena Point Sts, HI	05/84				
Keesler, MI	09/83				
Kokee AFS, HI	05/84				
Lonely, AK	05/81				
March, CA	10/83				
Oliktok, AK	05/81				
Patrick, FL	01/84				
Point Barrow, AK	05/81				
Point Lay, AK	05/81				
Punamano AFS, HI	05/84				
Reese, TX	01/84				
Shemya, AK	05/84				
USAF Academy, Co	05/84				
Vance, OK	02/84				
Volk Field, WI	03/84				
Wainwright, AK	05/81				
Wake Island	05/84				
Whitmeman, MO	11/83				
Willon Grove, PA	05/84				
Youngstown, OH	05/84				
Fort Worth, TX	01/83				
San Diego, CA	05/84				
Everett, MA	02/84				
Township, NY	03/84				
Tucson, AZ	01/82				
Binghampton, NY	06/84				
Sacramento, CA					
Corrine, UT					
Albuquerque, NM					
Waterton, CO					

	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
INSTALLATIONS IN PHASE II					
ARMY					
Cornhusker AAP, NE	04/79	81			
Detroit Arsenal, HI	05/80	84			
Ft. Belvoir, VA	09/80	84			
Ft. Drum, NY	10/81	84			
Iowa AAP, IA	07/80	80			
Joliet AAP, IL	03/78	80			
Lone Star AAP, TX	05/78	81			
Longhorn AAP, TX	03/79	82			
Natick Research & Dev. Command	10/79	84			
Phoenix Military Res, MD	06/82	82			
Riverbank AAP, CA	01/79	84			
Sharpe Army Depot, CA	01/79	81			
Twin Cities AAB, MN	08/78	82			
Vint Hill Farms Station, VA	05/81	83			
Volunteer AAP, IN	03/78	81			
NAVY					
NAS Jacksonville, FL	03/82	01/83			
NIROP Minneapolis, MNB	09/82	03/83			
NWS Concord, CA	04/82	08/83			
NAS Alameda, CA	04/82	08/83			
NSWC Dahlgren, VA	06/81	09/83			
Sewells Point Complex, VA	03/82	09/83			
NETC Newport, RI	04/82	09/83			
NSY Portsmouth, NH	09/82	09/83			
NSY Norfolk, VA	01/82	11/83			
NOS Indian Head, MD	03/82	11/83			
NAS Pensacola, FL	11/81	02/84			
MCB Camp Lejeune, NC	01/82	02/84			
Allegany Ballastics Lab, MD	03/82	02/84			
NAS Patuxent River, MD	03/83	02/84			
MCLB Barstow, CA	11/82	03/84			
NWSC Crane, IN	03/81	05/84			
NSC Craney Island, VA	03/82	05/84			
NAS Brunswick, ME	09/82	05/84			
NAS Memphis, TN	02/83	05/84			
NAS Corpus Christi, TX	02/83	05/84			
NRTF Driver, VA	04/83	05/84			
NSY Mare Island, CA	04/82	06/84			
NAS North Island, CA	11/82	06/84			
MCAS Cherry Point, NC	01/82	07/84			
NSB New London, CT	04/82	09/84			

	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
AIR FORCE					
Bergstrom, TX	01/83	01/84			
Buckley, CO	06/82	04/83			
Burlington, VT	03/83	09/83			
Cannon, NM	02/83	04/84			
Carswell, TX	09/83	05/84			
Castle, CA	06/83	02/84			
Chanute, IL	07/83	05/84			
Charleston, SC	03/83	04/84			
Chicago-O'Hare, IL	06/83	04/84			
Clear AFS, AK	01/81	05/84			
Davis Monthan, AZ	01/82	09/83			
Des Moines, IA	03/83	05/84			
Dew Line	05/81	06/84			
Dobbins, GA	08/81	05/84			
Dover, DE	04/83	05/84			
Duluth IAP, MN	12/81	09/83			
Edwards, CA	09/80	09/81			
Eglin, FL	02/81	01/83			
Eielson, AK	06/82	06/84			
Elmendorf, AK	02/83	06/84			
England, LA	11/82	01/84			
George, CA	08/81	09/83			
Griffis, NY	02/81	04/84			
Hancock Field, NY	12/81	08/83			
Hickam, HI	10/82	05/84			
Hill, UT	07/81	06/83			
Holloman, NM	02/83	04/84			
Homestead, FL	11/82	04/84			
Kingsley Field, OR	08/81	08/83			
Kirtland, NM	07/81	07/83			
Langley, VA	02/81	04/82			
Loring, ME	08/83	05/84			
Lowry, CO	03/83	04/84			
Luke, NV	08/81	09/83			
MacDill, FL	05/81	08/83			
Mather, CA	01/82	09/83			
Maxwell, AL	06/83	05/84			
McChord, WA	03/82	07/83			
McClellan, CA	02/81	05/84			
McEntire, SC	09/83	04/84			
McGuire, NJ	05/82	08/83			
Minn-St. Paul, MN	08/82	04/84			
Moody, GA	09/82	01/84			
Mountain Home, ID	02/83	01/84			
Myrtle Beach, SC	05/81	06/83			
Nellis, NV	08/81	09/83			
Niagara Falls, NY	06/83	04/84			

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	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
Norton, CA	04/82	08/83			
Olmstead, PA	11/83	12/83			
Otis, MA	09/82	09/83			
Pease, NH	09/83	04/84			
Richards Gebaur, MO	09/82	05/83			
Selfridge, MI	02/82	04/84			
Seymour Johnson, NC	01/82	09/83			
Shaw, SC	11/82	01/84			
Sheppard, TX	09/83	05/84			
Tinker, OK	07/81	09/83			
Travis, CA	02/83	02/84			
Tyndall, FL	07/81	09/83			
Westover, MA	08/81	08/83			
Wheeler, HI	10/82	05/84			
Williams, AZ	08/83	05/84			
Wright Patterson, OH	07/81	09/83			
Tulsa, OK	06/83	02/84			
Fort Worth, TX	01/83	03/83			
Marietta, GA	06/83	02/84			
Palmdale, CA	04/83	02/84			
Tucson, AZ	01/82	03/82			
Columbus, OH	08/83	02/84			
DEFENSE LOGISTIC AGENCY					
Defense General Supply Agency	01/81	10/82			
Defense Depot Memphis, TN	03/81	06/82			
Defense Depot Ogden, UT	03/80	08/81			
DFSP Lynn Haven	10/81	01/82			
DFSP Mukilteo	07/82	07/83			
DFSP Ozol	02/81	02/82			
INSTALLATIONS IN PHASE III					
ARMY					
Savanna Depot Activity, IL	09/78	80	82		
AIR FORCE					
Kelly, TX	07/81	08/83	06/84		

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	Phase I Start	Phase II Start	Phase III Start	Phase IV Start	Phase IV Final
INSTALLATIONS IN PHASE IV					
ARMY					
Alabama AAP, AL	02/78	79		82	
Anniston Army Depot, AL	11/77	82		82	
Milan AAP, TN	03/78	79		84	
Pine Bluff Arsenal, AR	05/77	76		76	
Rocky Mountain Arsenal, CO	10/76	76	78	80	
AIR FORCE					
Griffis, NY	02/81	04/84		05/84	
Hickam, HI	10/82	05/84		01/84	
Hill, UT	07/81	83		09/83	
Robins, GA	07/81	08/83		09/83	
Williams, AZ	08/83	05/84		06/83	
Fort Worth, TX	01/83	03/83		05/83	
Marietta, GA	06/83	02/84		03/83	
Tuscon, AZ	01/82	03/82		09/82	
DEFENSE LOGISTIC AGENCY					
DFSP Casco Bay	07/71	05/83		03/81	
DFSP Newington	06/81	05/83		10/83	
COMPLETED PHASE IV INSTALLATIONS					
ARMY					
Frankford Arsenal, PA	06/77	78		82	
Gateway AAP, MO	03/79	82		82	
Redstone Arsenal, AL	10/77	79		78	
St. Louis Ordance Plant, MO	06/79	79		81	
NAS Long Beach, CA	11/82			10/82	03/83

Question 5: When was the Installation Restoration Program begun? Please provide the number of installations on which Phase I of an IRP has yet to commence?

Answer 5: The program began in 1975, and specific goals and objectives were identified in 1981. As of June 30, 1984, Phase I studies had yet to commence at 73 installations.

Question 6: How many sites have actually been cleaned up since the IRP began? Of this number how many sites received emergency responses and how many were subject to remedial actions. Please break down each category by the year in which clean up occurred.

Answer 6: As of June 30, 1984, we had completed 16 site cleanups. Of these sites 5 received emergency response and 11 received remedial actions. The breakdown by year is as follows:

YEAR	CLEANUP	EMERGENCY RESPONSE
1981	1	0
1982	3	1
1983	3	4
1984	4	

Question 7: Does the Department of Defense Maintain a list of installations and sites which have been subject to damage claims by third parties, as expressed in letters, the print or broadcast media, or in court filings? If such a list is maintained, please provide it to the committee.

Answer 7: There is no list of Department of Defense sites which have been the subject of damage claims by third parties. However, the Military Services have compiled the following list of sites at which the potential for alledged association exists:

Installation	State
McChord AFB	WA
Wurtsmith AFB	MI
Newark AFS	OH
Offutt AFB	MO
Pease AFB	NH
Lowry AFB	CO
Mallory AFB	TN
Loring AFB	ME
Griffiss AFB	NY
Kirtland AFB	NM
Charleston AFB	SC
Hanscom AFB	MA
Air Force Plant #83	NM
Norton AFB	CA
Air Force Plant #44	AZ
Cornhusker AAP	NE
Letterkenny Army Depot	PA
Phoenix Military Reservation	MD
Redstone Arsenal	AL
Rocky Mountain Arsenal	CO
Twin Cities AAP	MN
* Bolsa Chica Military Reservation	CA
* Chemical Warfare Service Experimentation Station	FL
* Lake Ontario Ordnance Works	NY
* Santa Rosa Army Airfield	CA
* West Virginia Ordnance Works	WV

* Formerly-owned Sites

Question 9: Please provide the Committee with a list of sites on which Section 103 CERCLA notification have been made. For each site indicate whether the site is active or inactive and provide the installation name and address.

Answer 9: The current 103(c) list provided by EPA is attached. Unfortunately, it will require additional staffing by the Military Services to obtain the State locations and the current status of each site; i.e., active or inactive. This information should be available in about two weeks and will be forwarded to you immediately upon receipt.

1 ARMY - FEDERAL OWNED FACILITIES 1
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	01	MA0213820939	U S ARMY MATLS & MECH RES CTR	WATERTOWN
*	01	MA7210025154	US ARMY WAREHOUSE 1650	FT DEVENS
*	02	NJ2210020135	BURLINGTON ARMY PLANT	BURLINGTON
*	02	NJ2210020275	FT DIX #1	WRIGHTSTOWN
*	02	NJ3210020597	FT MONMOUTH #1	TINTON FALLS
*	02	NJ3210020324	FT MONMOUTH-EVANS #1	WALL TWP
*	02	NJ0210022752	MILITARY OCEAN TERMINAL (LANDFILL)	BAYONNE
*	02	NJ3210020704	PICATINNY ARSENAL	ROCKAWAY TWP
*	02	NY4210020281	FT DRUM #8	WATERTOWN
*	02	NY4210020414	NAVAL FACIL N DIV /ENGINEERING COM MAND	MONTAUK
*	02	NY0213820830	SENECA ARMY DEPOT	ROMULUS
*	02	NY2210025357	USMA STEWART ANNEX	NEWBURGH
*	02	NY8210020915	USMA-WEST POINT	WEST POINT
*	02	PR6210000125	CAMP GARCIA #1	VIEQUES
*	02	PR3210010002	CAMP SANTIAGO	SALINAS
*	02	PR2210010003	FT BUCHANAN	SAN JUAN
*	03	DC8210021004	USA FT MCNAIR	WASHINGTON
*	03	MD0210021002	BLOSSOM POINT FIELD TEST AREA	LA PLATA
*	03	MD0213824402	US ARMY PHOENIX MILITARY RESERVATI ON	JACKSONVILLE
*	03	MD3210021355	USA ABERDEEN PROVING GROUND	ABERDEEN PROVIN G GROUND
*	03	MD8211620267	USA FORT DETRICK	FREDERICK
*	03	MD9210020567	USA FORT GEORGE MEADE	FORT MEADE
*	03	MD8213822762	USA HARRY DIAMOND LABS	ADELPHI
*	03	MD2210090005	USN BACK CREEK REAR RANGE STRUCTUR E	CHESAPEAKE CITY
*	03	PA5210021510	SCRANTON ARMY AMMUNITION PLT	SCRANTON
*	03	PA2213720145	USA CARLISLE BARRACKS (DFAE BLDG 3 25)	CARLISLE
*	03	PA8210020444	USA INDIANTOWN GAP LANDFILL	ANNVILLE
*	03	PA8210022648	USA KEYSTONE ORDINANCE	GENEVA
*	03	PA6213820503	USA LETTERKENNY ARMY DEPOT (LEAD)	CHAMBERSBURG
*	03	PA8213820642	USA NEW CUMBERLAND DEPOT	NEW CUMBERLAND
*	03	PA5210022344	USA SUPPORT OAKDALE	OAKDALE
*	03	PA5213820892	USA TOBYHANNA ARMY DEPOT	TOBYHANNA
*	03	PA1210022082	USA WILLOW GROVE ARF	HATBORO
*	03	VA7210020031	USA ARLINGTON HALL STN	ARLINGTON
*	03	VA4210220139	USA CAMERON STATION	ALEXANDRIA
*	03	VA2210020416	USA FT AP HILL	BOWLING GREEN
*	03	VA5210020082	USA FT BELVOIR	FT BELVOIR
*	03	VA6210020321	USA FT EUSTIS	NEWPORT NEWS
*	03	VA7210020502	USA FT LEE	FT LEE
*	03	VA7213720603	USA FT MONROE ENTOMOLOGY SHOP	FT MONROE
*	03	VA8210020626	USA FT MYER	FORT MYER

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ARMY - FEDERAL OWNED FACILITIES 2
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*	REG	EPA ID.	SITE NAME	CITY
***				
*	03	VA2210020705	USA FT PICKETT	BLACKSTONE
*	03	VA6210020875	USA FT STORY	VIRGINIA BEACH
*	03	VA1210020730	USA RADFORD AMMUNITION PLT	RADFORD
*	03	VA8210020931	USA VINT HILL FARMS STATION	WARRENTON
*	03	VA7210020981	USA WOODBRIDGE RESEARCH FACILITY	WOODBRIDGE
*	04	AL6210020008	US ARMY ALABAMA ARMY AMMUNITION PLT	CHILDERSBURG
*	04	AL6210020776	US ARMY FORT RUCKER	FORT RUCKER
*	04	ALA210020562	US ARMY FT MCCLELLAN MP CHEM TRNG CTR	ANNISTON
*	04	ALA210020703	US ARMY PHOSPHATE DEVELOPMENT WORKS	MUSCLE SHOALS
*	04	AL3210020027	USA ANNISTON ARMY DEPOT	BYNUM
*	04	AL7210020742	USA REDSTONE ARSENAL	REDSTONE ARSENAL
*	04	GA4210022733	U S ARMY HUNTER ARMY AIRFIELD	HINESVILLE
*	04	GA3214013366	US ARMY AUGUSTA ARMY AMSA 54-G	AUGUSTA
*	04	GA3210020084	US ARMY BENNING	FORT BENNING
*	04	GA0210020046	US ARMY FORT GILLEM	FOREST PARK
*	04	GA9210020872	US ARMY FORT STEWART	HINESVILLE
*	04	GA0210020368	US ARMY SIGNAL CENTER FORT GORDON	FORT GORDON AUGUSTA
*	04	KY8213820105	LEXINGTON BLUE GRASS DEPOT ACTIVITY	RICHMOND
*	04	KY0210020509	LEXINGTON-BLUE GRASS DEPOT ACTIVITY	LEXINGTON
*	04	MS6210809871	USA ENGR ENVIRON LAB WATERWAYS EXP STA	VICKSBURG
*	04	NC5210022906	ARMY RESERVE XVIII AIRBORNE CORPS	MOREHEAD CITY
*	04	NC6210022046	US ARMY RESERVE XVIII AIRBORNE CORPS	ALBEMARLE
*	04	NC6210021626	US ARMY RESERVE XVIII AIRBORNE CORPS	HICKORY
*	04	NC5210022047	US ARMY RESERVE XVIII AIRBORNE CORPS	SALISBURY
*	04	NC4210022907	US ARMY RESERVE XVIII AIRBORNE CORPS	GARNER
*	04	NC4210021891	US ARMY RESERVE XVIII AIRBORNE CORPS	DURHAM
*	04	NC8210021624	US ARMY RESERVE XVIII AIRBORNE CORPS	ROCKY MOUNT
*	04	NC3210022486	US ARMY RESERVE XVIII AIRBORNE CORPS	HIGH POINT
*	04	NC3210021330	US ARMY RESERVE XVIII AIRBORNE CORPS	CHARLOTTE

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ARMY - FEDERAL OWNED FACILITIES 3
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*	REG	EPA ID.	SITE NAME	CITY
***				
*	04	NC0210021929	US ARMY RESERVE XVIII AIRBORNE COR PS	WILMINGTON
*	04	NC4210020042	US ARMY RESERVE XVIII AIRBORNE COR PS	ASHVILLE
*	04	NC8210022044	US ARMY RESERVE XVIII AIRBORNE COR PS	GREENVILLE
*	04	NC9210022787	US ARMY RESERVE XVIII AIRBORNE COR PS	DURHAM
*	04	NC9210020732	US ARMY RESERVE XVIII AIRBORNE COR PS	RALEIGH
*	04	NC9210022043	US ARMY RESERVE XVIII AIRBORNE COR PS	LUMBERTON
*	04	NC9210021755	US ARMY RESERVE XVIII AIRBORNE COR PS	GREENSBORO
*	04	NC6210022905	US ARMY RESERVE XVIII AIRBORNE COR PS.	CHARLOTTE
*	04	NC7210022045	US ARMY RESERVE XVIII AIRBORNE COR PS.	BREVARD
*	04	NC8210020121	USA XVIII ABN CORPS & FORT BRAGG	FORT BRAGG
*	04	SC7210020189	CHARLESTON ARMY DEPOT	NORTH CHARLESTON
*	04	TN5210020421	HOLSTON ARMY AMMUNITION PLANT	KINGSPORT
*	04	TN0210020582	MILAN ARMY AMMO PLT	MILAN
*	04	TN6210020933	US ARMY VOLUNTEER ARMY AMMO PLANT	CHATTANOOGA
*	04	TN4210020570	US ARMY/DEFENSE DEPOT MEMPHIS	MEMPHIS
*	05	IL7213820460	JOLIET ARMY AMMUNITION PLT UNIROYAL INC	JOLIET
*	05	IL2210020838	US ARMY FORT SHERIDAN	FORT SHERIDAN
*	05	IL5210021833	US ARMY ROCK ISLAND ARSENAL	ROCK ISLAND
*	05	IL3210020803	US ARMY SAVANNA ARMY DEPOT	SAVANNA
*	05	IL0213820376	US ARMY ST LOUIS AREA SUPPORT CTR	GRANITE CITY
*	05	IN9210020443	US ARMY INDIANA ARMY AMMO PLT	CHARLESTOWN
*	05	IN5210020454	US ARMY JEFFERSON PROVING GROUND	MADISON
*	05	IN1210022272	US ARMY NEWPORT ARMY AMMO PLT	NEWPORT
*	05	IN4210090003	US ARMY SOLDIER SUPPORT CTR	FORT BENJAMIN HARRISON
*	05	MI5210022781	US ARMY TANK AUTOMOTIVE COMMAND	WARREN
*	05	MN7213820908	NEW BRIGHTON / ARDEN HILL	ARDEN HILLS
*	05	OH7210020510	US ARMY LIMA ARMY TANK CTR	LIMA
*	05	OH5210020736	US ARMY RAVENNA ARMY AMMUNITION PLT	RAVENNA
*	05	OH6210020222	US DOD DEFENSE CONSTRUCTION SUPPLY CTR	COLUMBUS
*	05	WI9210020054	US ARMY BADGER ARMY AMMO PLT	BARABOO
*	05	WI4210090003	US ARMY CORP OF ENG FOUNTAIN CITY S BASE	FOUNTAIN CITY

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ARMY - FEDERAL OWNED FACILITIES 4
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*	REG	EPA ID.	SITE NAME	CITY
***				
*	05	WI3210020563	US ARMY FORT MCCOY MILITARY RESERV ATION	SPARTA
*	06	AR1213720187	US ARMY FORT CHAFFEE	FORT CHAFEE
*	06	AR0213820707	US ARMY PINE BLUFF ARSENAL	PINE BLUFF
*	06	LA0213820533	LOUISIANA ARMY AMMUNITION PLANT	SHREVEPORT
*	06	LA5214020716	US ARMY FORT POLK & PEASON RIDGE	FORT POLK
*	06	NM6213820974	US ARMY FORT WINGATE DEPOT ACTIVIT Y	GALLUP
*	06	OK4213720846	US ARMY FIELD ARTILLERY FT SILL	FT SILL
*	06	OK6213822798	US ARMY MCALESTER ARMY AMMUNITION PLANT	MCALESTER
*	06	TX0214020133	US ARMY CAMP BULLIS	SAN ANTONIO
*	06	TX9214022809	US ARMY CANYON LAKE RECREATION ARE A	SAN ANTONIO
*	06	TX8214020424	US ARMY FORT HOOD	FORT HOOD
*	06	TX3214020429	US ARMY FORT SAM HOUSTON	SAN ANTONIO
*	06	TX1213824872	US ARMY FUELS & LUBRICANT RESEARCH LAB	SAN ANTONIO
*	06	TX7213821831	US ARMY LONE STAR ARMY AMMUNITION PLANT	TEXARKANA
*	06	TX6213820529	US ARMY LONGHORN ARMY AMMUNITION P LANT	KARNACK
*	06	TX3213820738	US ARMY RED RIVER ARMY DEPOT	TEXARKANA
*	06	TX5213822682	US ARMY SAGINAW AIRCRAFT PLANT	SAGINAW
*	07	IA7213820445	IOWA ARMY AMMUNITION PLANT	MIDDLETOWN
*	07	KS0213820467	KANSAS ARMY AMMUNITION PLANT	PARSONS
*	07	KS1211890008	NATIONAL GUARD ARMORY & PARKING LO T	KANSAS CITY
*	07	KS3213820878	SUNFLOWER ARMY AMMUNITION PLANT	DE SOTO
*	07	MO3213720979	FT LEONARD WOOD	FT LEONARD WOOD
*	07	MO5210021288	FT LEUNARD WOOD-WELDON SPRINGS TRA INGING	ST CHARLES
*	07	MO4213820489	LAKE CITY ARMY AMMUNITION PLANT	INDEPENDENCE
*	07	MO8210022465	ST LOUIS ORDNANCE PLANT	ST LOUIS
*	07	MO6210022830	WELDON SPRINGS CHEMICAL PLANT	
*	07	MO3210090004	WELDON SPRINGS CHEMICAL QUARRY	
*	07	MO2210090005	WELDON SPRINGS-RAFFINATE PITS	ST CHARLES
*	07	NE6211890011	ARMY ORDNANCE PLANT	WAHOO
*	07	NE2213820234	CORNHUSKER ARMY AMMUNITION PLANT	GRAND ISLAND
*	08	CO2210020333	FITZSIMONS ARMY MEDICAL CTR	AURORA
*	08	CO2210020150	FT CARSON - US ARMY	FT CARSON
*	08	CO8213820725	PUEBLO ARMY DEPOT	PUEBLO
*	08	CO5210020769	ROCKY MOUNTAIN ARSL	COMMERCE CY
*	08	ND9210022779	CONCRETE MISSILE EARLY WARNING STA	CONCRETE
*	08	UT9210020922	DEFENSE DEPOT OGDEN	OGDEN
*	08	UT3213820894	TOOELE ARMY DEPOT	TOOELE

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ARMY - FEDERAL OWNED FACILITIES 5
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*	REG	EPA ID.	SITE NAME	CITY
***				
*	09	AZ7213820635	NAVAJO DEPOT ACTIVITY	FLAGSTAFF
*	09	AZ5213820991	YUMA PROVING GROUND US ARMY	YUMA
*	09	CA8210020436	FORT HUNTER LIGGETT	JOLON
*	09	CA7210020676	FORT ORD US ARMY	FORT ORD
*	09	CA5213790038	FT IRWIN NATIONAL TRNG CTR	FT IRWIN
*	09	CA4210020661	OAKLAND ARMY BASE WAREHOUSE AREA	OAKLAND
*	09	CA7210020759	RIVERBANK ARMY AMMUNITION PLT	RIVERBANK
*	09	CA0210020780	SACRAMENTO ARMY DEPOT	SACRAMENTO
*	09	CA8210020832	SHARPE ARMY DEPOT	LATHROP
*	09	CA5210020843	SIERRA ARMY DEPOT	HERLONG
*	09	HI3210022239	SCHOFIELD BARRACKS SAN LDFL	WAHIAWA
*	09	NV1210090006	HAWTHORNE ARMY AMMUNITION PLT	HAWTHORNE
*	09	NV5210090010	HAWTHORNE ARMY AMMUNITION PLT- NEW BOMB	HAWTHORNE
*	10	AK5210090002	U S ARMY - WHITTIER OIL STORAGE TA NK	WHITTIER
*	10	AK7210022342	US ARMY - GERSTLE RIVER TEST SITE	FORT GREELY
*	10	OR6213820917	U S ARMY - UMITILLA DEPOT	HERMISTON
*	10	WA9214053465	U S ARMY 9TH INFANTRY - FORT LEWIS	FORT LEWIS

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AIR FORCE - FEDERAL OWNED FACILITIES 1
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	01	MA0572124493	U S AF TRURO INST STP	TRURO
*	01	MA8570024424	U S AIR FORCE HANSCOM AFB	BEDFORD
*	01	MA2570024487	U S AIR FORCE SANI LANDFILL	FALMOUTH
*	01	MA0570024026	U S AIR FORCE WESTOVER AFB	CHICOPEE
*	01	ME9570024522	U S AIR FORCE LORING AFB	LIMESTONE
*	01	NH7570024847	U S AIR FORCE	PORTSMOUTH
*	01	VT6572824294	VERMONT AIR NATIONAL GUARD	BURLINGTON
*	02	NJ0570024018	MCGUIRE AFB #1	WRIGHTSTOWN
*	02	NY6570024624	BELL AEROSPACE	NIAGARA FALLS
*	02	NY4570024451	CORNWALL LF	CORNWALL
*	02	NY2570024438	DEFENSE FUEL SUPPORT POINT VERONA	VERONA
*	02	NY4571924451	GRIFFISS AIR FORCE BASE	ROME
*	02	NY1570024249	GRUMMAN AEROSPACE	CALVERTON
*	02	NY9572125475	HANCOCK FIELD	NORTH SYRACUSE
*	02	NY9570024233	LOCKPORT AFB	LOCKPORT
*	02	NY4571924774	PLATTSBURGH AIR FORCE BASE	PLATTSBURGH
*	02	NY4570024642	US AF PFT #38 SITE #2	PORTER TWP
*	02	NY8570028391	YOUNGSTOWN TENN ANN	PORTER CENTER
*	02	PR0570000604	FORMER RAMEY AFB	AGUADILLA
*	03	DE8570024010	USAF DOVER AFB 436 MAW	DOVER
*	03	MD0570024000	USAF ANDREWS AIR FORCE BASE	ANDREWS AFB
*	03	VA4570024477	USAF LANGLEY AFB	HAMPTON
*	03	VA5570090014	USAF OYSTER PT DEVEL CORP	NEWPORT NEWS
*	04	AL8570025918	USA MARTIN AIR NATIONAL GUARD STA	GADSDEN
*	04	AL7570024185	USAF GUNTER AIR FORCE STATION	MONTGOMERY
*	04	AL0570024182	USAF MAXWELL AIRFORCE BASE	MAXWELL AFB MONTGOMERY
*	04	AL9570025917	USAF 117 TAC RECON WNG ANG	BIRMINGHAM
*	04	FL3570024320	DEFENSE FUEL SUPPORT POINT LYNN HAVEN	LYNN HAVEN
*	04	FL8570024366	EGLIN AFB-ARMAMENT DIV	EGLIN AIR FORCE BASE
*	04	FL7570024375	HURLBURT FIELD	MARY ESTHER
*	04	FL6570024582	MACDILL AFB	MACDILL AFB
*	04	GA1570024306	USAF DOBBINS AIR FORCE BASE	MARIETTA
*	04	GA8570024606	USAF LOCKHEED GA CO PLT # 6	MARIETTA
*	04	GA0570024109	USAF MOODY AFB GA TAC	VALDOSTA
*	04	GA1570024330	USAF ROBINS AIR FORCE BASE	WARNER ROBINS
*	04	MS7570024060	COLUMBUS AFB MS	COLUMBUS
*	04	MS2570024164	KEESLER AFB	BILOXI
*	04	NC6570027460	DARE COUNTY RANGE SEYMOUR JOHNSON AFB	ENGLEHARD
*	04	NC6570024475	POPE AFB	POPE AIR FORCE BASE
*	04	NC7570024474	SEYMOUR JOHNSON AFB	GOLDSBORO
*	04	SC9570024332	DEF FUEL SUPPORT PT CHAS	HANAHAN

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AIR FORCE - FEDERAL OWNED FACILITIES 2
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	04	SC7570024821	MYRTLE BEACH AFB	MYRTLE BEACH
*	04	SC9570090002	SHAW AFB POINSETT RANGE	WEDGEFIELD
*	04	TN8570024044	ARNOLD ENGINEERING DEVELOPMENT CEN TER	ARNOLD AIR FORC E STATION
*	04	TN4570024196	MCGHEE TYSON AIR NATIONAL GUARD BA SE	KNOXVILLE
*	05	IL1570024157	US AIR FORCE CHANUTE AIR FORCE BAS E	RANTOUL
*	05	IL7570024177	US AIR FORCE SCOTT AFB	SCOTT AIR FORCE BASE
*	05	IN9570024472	USDAF USAF GRISSOM AFB ALERT FAC	GRISSOM AFB
*	05	MI0571924760	US AIR FORCE K I SAWYER AFB	GWINN
*	05	MI5570024278	US AIR FORCE WURTSMITH AFB	OSCODA
*	05	MN7570024284	US AFB DULUTH INTL AIRPORT	DULUTH INTL AIR PORT
*	05	MN8570024275	US AIR FORCE MINNEAPOLIS ST PAUL I AP	MINNEAPOLIS
*	05	OH7571724312	US AIR FORCE WRIGHT-PATTERSON AFB	FAIRBORN
*	05	OH7570028764	US AIR FORCE YOUNGSTOWN MAP OHIO	VIENNA TWP
*	05	WI5571224299	US AIR FORCE GEN BILLY MITCHELL FL D	MILWAUKEE
*	06	AR8571924473	USAF BLYTHEVILLE AIR FORCE BASE	BLYTHEVILLE
*	06	LA9571924050	USAF BARKSDALE AIR FORCE BASE	BARKSDALE AFB
*	06	LA9572124452	USAF ENGLAND AIR FORCE BASE	ALEXANDRIA
*	06	NM3572028444	US AIR FORCE PLANT NO 83	ALBUQUERQUE
*	06	NM7572124454	USAF CANNON AIR FORCE BASE	CANNON AFB
*	06	NM6572124422	USAF HOLLOMAN AIR FORCE BASE	HOLLOMAN AFB
*	06	NM9570024423	USAF KIRTLAND AIR FORCE BASE	KIRTLAND AIR FO RCE BASE
*	06	OK8572024604	US AIR FORCE PLANT NO 3	TULSA
*	06	OK9571824045	USAF ALTUS AIR FORCE BASE LANDFILL	ALTUS
*	06	OK1571724391	USAF TINKER AIR FORCE BASE	TINKER AIR FORC E BASE
*	06	OK4571524095	USAF VANCE AIR FORCE BASE	ENID
*	06	TX4570090007	US AIR FORCE ELLINGTON AFB HAZ WAS TE	HOUSTON
*	06	TX0572124188	USAF BERGSTROM AIR FORCE BASE	AUSTIN
*	06	TX2572024303	USAF BROOKS AIR FORCE BASE	SAN ANTONIO
*	06	TX0571924042	USAF CARSWELL AIR FORCE BASE	FORT WORTH
*	06	TX3571924643	USAF DYESS AIR FORCE BASE	ABILENE
*	06	TX2571524071	USAF GOODFELLOW AIR FORCE BASE	SAN ANGELO
*	06	TX2571724333	USAF KELLY AIR FORCE BASE	SAN ANTONIO
*	06	TX4571524129	USAF LACKLAND AIR FORCE BASE	SAN ANTONIO
*	06	TX2571524105	USAF LAUGHLIN AIR FORCE BASE	DEL RIO
*	06	TX8571524117	USAF RANDOLPH AIR FORCE BASE	SAN ANTONIO
*	06	TX8571524091	USAF REESE AIR FORCE BASE	LUBBOCK

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AIR FORCE - FEDERAL OWNED FACILITIES 3
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	06	TX3571524161	USAF SHEPPARD AIR FORCE BASE	WICHITA FALLS
*	07	IA6572825895	AIR NATIONAL GUARD BASE	DES MOINES
*	07	MO9571824292	RICHARDS GEBAUR AIR FORCE BASE	BELTON
*	07	MO8571924549	WHITEMAN AIR FORCE BASE	WHITEMAN AFB
*	07	NE8571924648	OFFUTT AIR FORCE BASE	OFFUTT AIR FORCE BASE
*	08	CO1571524130	LOWRY AIR FORCE BASE	LOWRY AFB
*	08	CO9571924191	PETERSON AIR FORCE BASE	COLORADO SPGS
*	08	MT8571924556	MALMSTROM AIR FORCE BASE	GREAT FLS
*	08	ND3571924759	GRAND FORKS AIR FORCE BASE	GRAND FRKS
*	08	ND4571924758	MINOT AIR FORCE BASE	MINOT AFB
*	08	SD2571924644	ELLSWORTH AIR FORCE BASE	ELLSWORTH AFB
*	08	UT0571724350	HILL AIR FORCE BASE	HILL AFB
*	08	UT8570025561	LITTLE MOUNTAIN TEST ANNEX	OGDEN
*	08	UT0570090001	UTAH TEST AND TRAINING RANGE (UTTR)	WENDOVER
*	09	AZ9573124055	ARIZONA AIR NATIONAL GUARD	TUCSON
*	09	AZ4570024055	DAVIS MONTHAN AFB	TUCSON
*	09	AZ0570024133	LUKE AIR FORCE BASE	LUKE AFB
*	09	AZ7570028582	WILLIAMS AIR FORCE BASE	CHANDLER
*	09	CA7570024508	BEALE AIR FORCE BASE	BEALE AFB
*	09	CA3570024551	CASTLE AIR FORCE BASE	CASTLE AFB
*	09	CA1570024504	EDWARDS AIR FORCE BASE	EDWARDS
*	09	CA2570024453	GEORGE AIR FORCE BASE	VICTORVILLE
*	09	CA8570024143	MATHER AIR FORCE BASE	SACRAMENTO
*	09	CA4570024337	MCCLELLAN AFB	SACRAMENTO
*	09	CA4570024345	NORTON AIR FORCE BASE	NORTON AFB
*	09	HI8570090011	FORT KAMEHAMEHA DSPL SITE	HONOLULU
*	09	HI8570028722	HICKAM AIR FORCE BASE	HONOLULU
*	09	HI3573028732	WHEELER AIR FORCE BASE	HONOLULU OAHU
*	10	AK8570028615	USAF - ANIAK AFB LDFL	ANIAK
*	10	AK4570028619	USAF - BEAR CREEK AFS LDFL	BEAR CR
*	10	AK9570028622	USAF - BETHEL AFS LDFL	BETHEL
*	10	AK8570028623	USAF - BIG MOUNTAIN AFS LDFL	BIG MOUNTAIN
*	10	AK6572728628	USAF - CAMPION AFS LDFL	CAMPION AFS
*	10	AK1572728631	USAF - CAPE LISBURNE AFS LDFL	CAPE LISBURNE AFS
*	10	AK0572728632	USAF - CAPE NEWENHAM AFS LDFL	CAPE NEWENHAM AFS
*	10	AK9572728633	USAF - CAPE ROMANZOF AFS LDFL	CAPE ROMANZOF AFS
*	10	AK5570028634	USAF - CAPE SARICHEF AFS LDFL	CAPE SARICHEF
*	10	AK1570028638	USAF - CLEAR AFS LDFL	CLEAR AFS
*	10	AK5570028618	USAF - DEWLINE SITE BAR-MAIN	BARTER ISLAND
*	10	AK9570028697	USAF - DEWLINE SITE LIZ-2	POINT LAY
*	10	AK6570028716	USAF - DEWLINE SITE LIZ-3	WAINWRIGHT

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AIR FORCE - FEDERAL OWNED FACILITIES 4
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	10	AK3570028677	USAF - DEWLINE SITE POW-1	LONLEY
*	10	AK5570028691	USAF - DEWLINE SITE POW-2	OLIKTOK
*	10	AK2570028652	USAF - DEWLINE SITE POW-3	FLAXMAN ISLAND
*	10	AK1570028695	USAF - DEWLINE STA POW-MAIN	POINT BARROW
*	10	AK3570028644	USAF - DRIFTWOOD BAY AFS LDFL	DRIFTWOOD BAY
*	10	AK2570028645	USAF - DUNCAN CANAL	DUNCAN CANAL
*	10	AK1570028646	USAF - EIELSON AFB LDFL	EIELSON AFB
*	10	AK8570028649	USAF - ELMENDORF AFB	ANCHORAGE
*	10	AK3572728654	USAF - FORT YUKON AFS LDFL	FORT YUKON AFS
*	10	AK9570028655	USAF - GALENA AIRPORT LDFL	GALENA
*	10	AK5570028659	USAF - GRANITE MOUNTAIN AFS LDFL	GRANITE MOUNTAIN
*	10	AK3572728662	USAF - INDIAN MOUNTAIN AFS LDFL	INDIAN MOUNTAIN AFB
*	10	AK8570028664	USAF - KALAKAKET CREEK	KALAKAKET
*	10	AK3570028669	USAF - KING SALMON AIRPORT LDFL	KING SALMON
*	10	AK4570028684	USAF - NIKOLSKI AFS LDFL	NIKOLSKI
*	10	AK3570028685	USAF - NORTH RIVER AFS LDFL	NORTH RIVER
*	10	AK8570028698	USAF - PORT HEIDEN AFS LDFL	PORT HEIDEN
*	10	AK7570028699	USAF - PORT MOLLER AFS LDFL	PORT MOLLER
*	10	AK8572728709	USAF - SPARRENVOHN AFS	SPARRENVOHN AFS
*	10	AK4572728711	USAF - TATALINA AFS LDFL	TATALINA AFS
*	10	AK3572728712	USAF - TIN CITY AFS LDFL	TIN CITY AFS
*	10	AK7570028616	USAF - WHITE ALICE SITE - ANVIL MOUNTAIN	NOME
*	10	AK7572728742	USAF - WHITE ALICE SITE - KOTZEBUE	KOTZEBUE
*	10	ID0572890002	NATIONAL GUARD IMPACT AREA	UNINCORPORATED
*	10	WA9571924647	USAF - FAIRCHILD AIRFORCE BASE	SPOKANE
*	10	WA8570024200	USAF - MCCHORD AIR FORCE BASE	TACOMA

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DEFENSE LOGISTICS - FEDERAL OWNED FACILITIES
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	01	ME4971590001	U S DEFENSE FUEL SUPPORT-PT CASCO BAY	S HARPSWELL NEC K
*	01	ME3971524324	U S DEFENSE FUEL SUPPORT-PT SEARSPORT	SEARSPORT
*	01	NH2971590003	U S DEFENSE FUEL SUPPORT-PT NEWINGTON	NEWINGTON
*	01	RI8971524790	U S NAVAL DEFENSE FUEL SUPPORT	PORTSMOUTH
*	03	VA3971520751	DEFENSE GENERAL SUPPLY CENTER	RICHMOND
*	05	MI2971590003	US DEPT OF DEFENSE DFSP ESCANABA	WELLS TWP
*	05	MI1971590004	US DEPT OF DEFENSE DFSP HARRISVILLE	HARRISVILLE
*	05	OH3971524357	US DOD DEFENSE ELECTRONICS SUPPLY CTR	DAYTON
*	05	OH9971590006	US DOD DEFENSE FUEL SUPPORT PT CIN N	CINCINNATI
*	08	ND0971528807	DEFENSE FUEL SUPPORT POINT GRAND F ORKS	GRAND FRKS
*	09	CA4971520834	DEFENSE DEPOT TRACY	TRACY
*	09	CA0971595236	DEFENSE FUEL SUPPORT POINT OZOL	MARTINEZ
*	09	CA2971590029	ESTERO BAY DEFENSE FUEL SUPPORT PO INT	MORRO BAY
*	09	CA8971524360	NORWALK DEFENSE FUEL SUPPORT POINT	NORWALK
*	09	CA3971590028	SAN PEDRO DEFENSE FUEL SUPPORT POI NT	SAN PEDRO
*	10	WA2971590003	USAF - DEFENSE FUEL SUPPORT	MUKILTEO

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NAVY - FEDERAL OWNED FACILITIES 1
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	01	CT4170022020	AREA A LANDFILL SITE NO 2	GROTON
*	01	MA2170024259	U S NAVY	BOSTON
*	01	ME8170022018	U S NAVY NAS	BRUNSWICK
*	01	ME7170022019	U S NAVY PORTSMOUTH NAVAL SHIPYARD	KITTERY
*	01	RI6170022036	U S NAS QUANSET PT	NORTH KINGSTON
*	01	RI2170024036	U S NAVAL BASE	NEWPORT
*	01	RI8170024790	U S NAVAL UNDERWATER SYS CTR	NEWPORT
*	01	RI1170024243	U S NAVY--MCALLISTER	NEWPORT
*	02	NJ7170023744	NAVAL AIR ENGINEERING CENTER	LAKEHURST
*	02	NJ0170022172	NWS EARLE-MAIN #2	COLTS NECK
*	02	NJ9170022694	US NAVAL AIR PROPULSION CTR	TRENTON
*	02	NY5170009000	MITCHELL FIELD	HEMPSTEAD
*	02	NY0170022198	MITCHELL MANOR	EAST MEADOW
*	02	NY6170022168	NAS-FLOYD BENNETT	BROOKLYN
*	02	PR2170027203	US NAVAL STA	CEIBA
*	03	DC8170024311	USN NAVAL RESEARCH LAB BLDG A-11	WASHINGTON
*	03	DC9170024310	USN WASHINGTON NAVAL DIST BLDG 170	WASHINGTON
*	03	MD7170090016	USN BLOODSWORTH ARCHIPELAGO	N/A
*	03	MD7170023496	USN COMMISARY STORE PARK LOT AREA SOUTH	ANNAPOLIS
*	03	MD0170022602	USN NAVAL ACADEMY	ANNAPOLIS
*	03	MD7170024536	USN NAVAL AIR STATION	PATUXENT
*	03	MD7170024684	USN NAVAL ORDNANCE STATION - 1005	INDIAN HEAD
*	03	MD6170024685	USN NAVAL RESEARCH LAB CHES BAY DE TACH	RANDLE CLIFF BE ACH
*	03	MD5170022540	USN NAVAL SUPPORT FACILITY	THURMONT
*	03	MD0170023444	USN NAVAL SURFACE WEAPONS CENTER	WHITE OAK
*	03	MD4170022541	USN SURFACE WEAPONS CENTER	SOLOMON'S ISLAN D
*	03	PA6170024545	NAVAL AIR DEVELOPMENT CENTER	WARMINSTER
*	03	PA4170022418	USN NAVAL BASE - PHILADELPHIA	PHILADELPHIA
*	03	PA3170022104	USN SHIPS PARTS CENTER	MECHANICSBURG
*	03	VA1170024698	CAMP PEARY DOD	WILLIAMSBURG
*	03	VA1170024722	USMC DEVEL + ED COMMAND	QUANTICO
*	03	VA8170090015	USN AUXILIARY LANDING FIELD FENT	CHESAPEAKE
*	03	VA9170022512	USN BLDG V-95 PEST CNTRL RINSATE	NORFOLK
*	03	VA1170090012	USN CAMP PENDLETON	VIRGINIA BEACH
*	03	VA7170022472	USN CRANEY IS FUEL TER	PORTSMOUTH
*	03	VA5170022938	USN FLEET COMBAT TRAINING CENTER	VIRGINIA BEACH
*	03	VA2170024135	USN MAINTENANCE AREA BLDG # 13	ARLINGTON
*	03	VA5170022482	USN NAVAL AIR BASE	LITTLE CREEK
*	03	VA6170022556	USN NAVAL AIR REWORK FAC	NORFOLK
*	03	VA2170024606	USN NAVAL AIR STN OCEANA	OCEANA
*	03	VA8170022513	USN NAVAL MAGAZINE AREA	NORFOLK
*	03	VA1170024813	USN NAVAL SHIPYARD NORFOLK	PORTSMOUTH

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NAVY - FEDERAL OWNED FACILITIES 2
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	03	VA7170024684	USN NAVAL SURFACE WEAPONS CTR DAHL GREN	DAHLGREN
*	03	VA8170024170	USN NAVAL WEAPONS STA	YORKTOWN
*	03	VA6170061463	USN NORFOLK NAVAL BASE-CAMP ALLEN	NORFOLK
*	03	VA9170022488	USN RADIO TRANSMITTING FACILITY	SUFFOLK
*	03	VA7170090008	USN SCOTT CENTER LANDFILL SITE #1	PORTSMOUTH
*	03	VA8170090007	USN SOUTHGATE ANNEX	PORTSMOUTH
*	03	VA5170000181	USN ST JULIENS CREEK ANNEX	PORTSMOUTH
*	03	WV0170023691	ALLEGANY BALLISTICS LAB	SHORT GAP
*	03	WV9170022488	NRS SUGAR GROVE	SUGAR GROVE
*	04	FL6170024412	US NAS JACKSONVILLE FLORIDA	JACKSONVILLE
*	04	FL2170023244	USN NAVAL AIR STA WHITING FIELD SITE 5	MILTON
*	04	FL2170022634	USN NAVY FUEL DEPOT	JACKSONVILLE
*	04	FL9170024567	USN PUBLIC WORKS CTR	PENSACOLA
*	04	GA7170023694	US MARINE CORPS LOGISTICS BASE 555	ALBANY
*	04	GA4170090001	US NAVY/ NAVAL SUBMARINE SUPPORT BASE	KINGS BAY
*	04	MS2170022626	USN NAVY CONST BATTALION CTR	GULFPORT
*	04	NC1170027261	MARINE CORPS AIR STATION CHERRY POINT	CHERRY POINT
*	04	NC6170022580	MARINE CORPS BASE CAMP LEJEUNE	CAMP LEJEUNE
*	04	NC7170090008	USMC/CRASH CREW BURN PIT	MOREHEAD CITY
*	04	NC8170022570	USMC/FIRE FIGHTING TRNG PIT (SITE 2)	JACKSONVILLE
*	04	SC6170022762	MARINE CORPS RECRUIT DEPOT	PARRIS ISLAND
*	04	TN2170022600	US NAS NAVAL AIR STA MEMPHIS	MILLINGTON
*	05	IN5170023498	US NAVY NAVEL WEAPONS SUPPORT CTR	CRANE
*	05	MN3170022914	US NAVY/NAVAL SEA SYSTEMS COMMAND	FRIDLEY
*	05	OH1170090004	US NAVY NAVEL WEAPONS IND RESERVE PLT	COLUMBUS
*	06	TX3170024738	US NAVAL AIR STATION CHASE FIELD	BEEVILLE
*	06	TX7170022787	US NAVAL AIR STATION CORPUS CHRISTI	CORPUS CHRISTI
*	06	TX6170022770	US NAVY DALLAS NAVAL WEAPONS IND RES PLT	DALLAS
*	06	TX9170024708	US NAVY MCGREGOR NAVAL WEAPONS	MCGREGOR
*	07	KS5170022938	JOHNSON COUNTY INDUSTRIAL AIRPORT	OLATHE
*	07	NE6170023026	NAVAL RESERVE CENTER	LINCOLN
*	07	NE1170090012	NAVAL SUPPORT ACTIVITY	OMAHA
*	08	UT3170027277	HERCULES INC NIROP	MAGNA
*	09	CA2170023236	ALAMEDA NAVAL AIR STA	ALAMEDA
*	09	CA8170024261	BARSTOW MARINE CORPS LOGISTICS BASE	BARSTOW
*	09	CA7170090057	CAMP NIMITZ AREA	SAN DIEGO
*	09	CA2170023533	CAMP PENDLETON MARINE CORPS BASE	CAMP PENDLETON

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NAVY - FEDERAL OWNED FACILITIES 3
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	09	CA2170023152	CHINA LAKE NAVAL WEAPONS STA	CHINA LAKE
*	09	CA0170090054	FALLBROOK ANNEX	FALLBROOK
*	09	CA3170024381	LEMOORE NAVAL AIR STA	LEMOORE
*	09	CA2170023194	LONG BEACH NAVAL STA	LONG BEACH
*	09	CA7170024775	MARE ISLAND NAVAL SHIPYARD	VALLEJO
*	09	CA9170024740	MIRAMAR NAVAL AIR STA	SAN DIEGO
*	09	CA0170024335	NAVAL FACILITIES ENGINEERING COMM	SAN DIEGO
*	09	CA9170090055	NAVAL RADIO TRANSMITTING FACIL	DIXON
*	09	CA7170090016	NORTH ISLAND NAVAL AIR STA	SAN DIEGO
*	09	CA0170027254	OAKLAND NAVAL REGIONAL MEDICAL CTR	OAKLAND
*	09	CA4170090027	OAKLAND NAVAL SUPPLY CENTER	OAKLAND
*	09	CA9170027271	PACIFIC MISSILE TEST CTR	POINT MAGU
*	09	CA1170090020	POINT LOMA ANNEX NAVAL SUPPLY CTR	SAN DIEGO
*	09	CA6170023323	PORT HUENEME NAVAL CONSTR BATTALION CTR	PORT HUENEME
*	09	CA6170024289	SAN DIEGO NAVAL STATION	SAN DIEGO
*	09	CA0170024491	SEAL BEACH NAVAL WEAPONS STA	SEAL BEACH
*	09	CA2170024382	STOCKTON NAVAL COMMUNICATION STA	STOCKTON
*	09	CA7170023330	TREASURE ISL NAVAL STA	SAN FRANCISCO
*	09	GU0170027320	NAVAL AIR STA GUAM- ABANDONED DUMP	AGANA
*	09	GU7170027323	NAVAL STA GUAM	AGANA
*	09	GU0170090005	NIMITZ HILL ANNEX	NIMITZ HILL
*	09	GU4170090001	PITI POWER PLT	AGANA
*	09	GU1170090004	SASA VALLEY FUEL DEPOT	PITI
*	09	HI1170024326	BARBERS POINT NAVAL AIR STA	BARBERS POINT
*	09	HI6170022762	KANEOHE MCAS LDFL	KANEOHE BAY
*	09	HI3170090010	PEARL CITY FUEL ANNEX	PEARL CITY
*	09	HI6170024339	PEARL HARBOR NAVAL SHIPYARD	HONOLULU
*	09	HI2170024341	PEARL HARBOR NAVAL STA	PEARL HARBOR
*	09	HI1170024342	PEARL HARBOR NAVAL SUPPLY CTR	PEARL HARBOR
*	09	HI1170024334	PEARL HARBOR NAVY PUBLIC WORKS CTR	PEARL HARBOR
*	09	HI0170090005	PEARL HARBOR NPC MAKALAPA PESTICIDE PIT	PEARL HARBOR
*	09	HI8170090015	WAIAWA SHAFT (FEDERAL FACILITY0	PEARL CITY (IS OF OAHU)
*	09	MQ6170027332	MIDWAY ISL NAVAL AIR STA	MIDWAY ISL
*	10	AK4170024323	USAF - WHITE ALICE ANTENNA AITE - ADAK	ADAK
*	10	WA9170023361	U S NAVY - NAVAL AIR STA. WHIDBEY ISLAND	OAK HARBOR
*	10	WA5170027291	U S NAVY - NAVAL SUBMARINE BASE - BANGOR	BREMERTON
*	10	WA2170023426	U S NAVY - NAVAL SUPPLY CENTER PUG ET SND	MANCHESTER
*	10	WA2170023418	U S NAVY - PUGET SOUND NAVAL SHIPYARD	BREMERTON

PREPARED BY OPPM

NAVY - FEDERAL OWNED FACILITIES 4
06/15/1984

*	REG	EPA ID.	SITE NAME	CITY
***				
*	10	WA4170090001	U S NAVY NAVAL UNDERSEA WARFARE EN G STA	INDIAN ISLAND
*	10	WA1170023419	U S NAVY-NAVAL UNDERSEA WARFARE EN G STA	KEYPORT

PREPARED BY OPPM

Answers to Questions
Submitted by Senator George J. Mitchell
at the May 23 Hearing of
The Committee on Environment and Public Works
United States Senate

Questions for Col. Peter S. Daley, Office of Environmental Policy, Department of Defense.

Question 1: On April 25, before a group of EPA regional administrators, you stated: "The formerly-owned program will grow to $62 million in 1985. Of importance to us here today is that we need your help in identifying formerly-owned sites for cleanup action."

At what rate are formerly-owned sites currently being identified? Is the identification rate increasing/decreasing/steady since your effort began?

Answer 1: The identification rate is increasing. The Secretary of Defense tasked the Army to manage the formerly-used site cleanup program including maintenance of an inventory of candidate formerly-used sites for further investigation. There are now approximately 2,000 sites in the Army's formerly-used site inventory to be evaluated. Many of these sites do not involve chemical contamination; they have been nominated due to unsafe/ hazardous buildings, structures or debris.

Question 2: Also on April 25, you stated: "If both of these groups (managers and regulators) follow their instincts, the audit program will stop. Clearly, we must deliver the reports to you and your state counterparts. If in doing so we reap bad publicity and NoVs by the score, we won't get many mangers to sign up for future audit programs. Therefore the future of audits is to a great extent in your hands."

What did you mean when you used the phrase "we won't get many managers to sign up"? From this are we to understand that future audits will be voluntary rather than mandatory?

Answer 2: The phrase, "we won't get many managers to sign up" was used figuratively. Audit programs are designed to uncover potential instances of non-compliance with environmental laws and regulations. They should be an effective tool to start necessary actions. However, if audit programs result in bad publicity, they would be demotivating and may not get the full support necessary to make sure they're effective. Thus, issues surrounding environmental audits must be carefully considered.

Question 3: It is my understanding that DoD, not EPA, has authority to make findings as to whether or not a Federal Facility under the jurisdiction of DoD is in compliance with the provisions of CERCLA.

Is my understanding correct? Under what Executive Order was this authority delegated by the Executive to DoD? To your knowledge, does any other Federal Department or Agency maintaining Federal Facilities also possess CERCLA regulatory authority over those facilities?

Answer 3: That is only partly correct. DoD is not exempt from CERCLA. EPA maintains jurisdiction over DoD for all elements of CERCLA, except that the functions vested in the President by Sections 104(a), (b), (e), and 111(g) of the Act are delegated to the Secretary of Defense with respect to releases from DoD facilities or vessels. Executive Order 12316, dated August 14, 1981, accomplished this delegation.

To my knowledge, DoD is the only Federal activity that has been delegated independent authority for Sections 104(a), (b) and 111(g).

Questions for Dr. Lawrence J. Korb, Assistant Secretary of Defense

Question 1: The Department of Defense submits numerous reports and plans to EPA for its review. How is EPAs turn-around time? If DoD intensifies its hazardous waste cleanup efforts, do you anticipate that EPA will have difficulty reviewing, and commenting upon, the materials which DoD submits to EPA? Is EPA workload in this area something on which this Committee should focus, in your judgment?

Answer 1: EPA has started to experience some difficulty in turn-around as a result of greatly increased DoD Installation Restoration Program efforts. We are hopeful EPA will be able to devote adequate resources to assure no severe problem develops.

Question 2: In his prepared testimony, Mr. Kenneth S. Kamlet of the National Wildlife Federation alleges that DoD gives a high priority for conducting assessments and cleanups to sites which may be transferred to other ownerships, while giving relatively short-shrift to potential impacts such as contamination or ground and surface waters.

Please respond to this statement.

Answer 2: While it is true that DoD places importance on potential contamination problems on land which may be transferred to non-DoD control, over 90% of our expenditures have been on currently-owned, active installations. Our principal concern is to eliminate health and environmental hazards wherever they occur as quickly as possible.

Question 3: The Installation Restoration Program is divided into four phases. Phase I, the records search, is the preliminary identification of potential problems. Phase II consists of follow-on field work to determine the extent and magnitude of contaminant migration. Phase II consists of technology-based development to support the development of project plans for controlling migration or restoring the installation. Phase IV includes those efforts which are required to control identified hazardous conditions.

Please provide the Committee with the following:

o a list of those installations in Phase I, and the date for each installation when Phase I commenced;

o a list of those installations in Phase II, and the dates for each installation when Phase I and Phase II commenced;

o a list of those installations in Phase III, and the dates for each installation when Phase I, Phase II, and Phase III commenced;

o a list of those installations in Phase IV and the dates for each installation when Phase I, Phase II, Phase III, and Phase IV commenced;

o a list of those installations for which Phase IV has been completed and the dates of completion. In addition, for each installation, please provide the dates when Phase I, Phase II, Phase II, and Phase IV commenced.

Answer 3: This information will be provided in a second letter (to follow).

Question 4: The Environmental Protection Agency requires, and performs through contractors, Remedial Investigation and Feasibility studies (RI/FS) for sites on the National Priority List (NPL). At the present time, Department of Defense sites, even those which appear on the NPL, are not subject to EPA's RI/FS. Would the Department of Defense oppose having its Federal facilities subject to the same investigation and feasibility study authority which EPA asserts over facilities under the jurisdiction of other departments and agencies of the Federal Government? If so, please provide the Department's reasons for this opposition.

Answer 4: We do not oppose it. However, we believe it is important to point out that we believe the Phase I and Phase II portions of the IRP are more comprehensive and more detailed than EPA's RI/FS. Accordingly, we believe EPA's resources are better applied to non-DoD sites. We are approximately 50% of the way through our Phase II program. There is no clear advantage to making EPA responsible for RI/FS on DoD installations, and by changing this procedure now we believe progress will be slowed, not expedited.

We have already made it clear to the Military Departments that EPA and State environmental officials shall have unrestricted access to our installations for the purpose of evaluating DoD hazardous waste sites.

Question 5: When was the Installation Restoration Program (IRP) begun? Please provide the number of installations on which Phase I of an IRP has yet to commence.

Answer 5: The program began in 1975, and specific goals and objectives were identified in 1981. As of April 1984, we had begun or completed 328 of 460 required Phase I Studies. We will provide updated data in 30 days.

Question 6: How many sites have actually been cleaned up since the IRP began? Of this number, how many sites received emergency responses and how many were subject to remedial actions? Please breakdown each category by the year in which the cleanup occurred.

Answer 6: As of April 1984, we had completed 7 cleanups. Additional information will be provided in a second letter (to follow).

Question 7: Does the Department of Defense maintain a list of installations and sites which have been the subject of damage claims by third parties, as expressed in letters, the print or broadcast media, or in court filings? If such a list is maintained, please provide it to the Committee.

Answer 7: There is no centrally-maintained list which includes all of the elements in the question. However, individual parts of this list are maintained by the Military Services. We are gathering this information and will provide it in our second letter (to follow).

Question 8: Please provide the Committee with the following for each fiscal year since the IRP was begun--

- o the level of funding requested by the Administration;
- o the level of funding provided by the Congress;
- o the level of funding actually spent to conduct the program (please estimate for FY 1984).

Answer 8: Prior to FY 1984, funding for the IRP was not separately identifiable within the DoD budget; requirements were funded out of operations and construction accounts. Beginning in FY 1984, IRP became part of the Environmental Restoration, Defense appropriation. The amount requested for FY 1985 for IRP was $194.8 million; this was reduced to $145.3 million as part of the deficit reduction plan.

($ in millions)

Fiscal Year	Amount Spent	
1975-1980	approx. 100.0	
1981	23.7	
1982	27.6	
1983	26.9	
1984	85.9	(projected, 100% of allocation)
1985	194.8	requested in President's Budget
	145.3	deficit reduction level

Question 9: Please provide the Committee with a list of sites on which Section 103 CERCLA notification have been made. For each site indicate whether the site is active or inactive and provide the installation name and address.

Answer 9: The CERCLA 103(c) notifications for Department of Defense sites were submitted to EPA by DoD officials at the installation level in 1981.

Some additional DoD sites were submitted by private parties and DoD was not aware of submissions until after the fact. Because EPA maintains the current 103(c) list, we requested the list from EPA. We will provide it in our second letter (to follow).

Question 10: When you refer to the IRP, do you include in it the Navy's "Assessment and Control of Installation Pollutants" (NACIP) program? If you do not consider NACIP a part of the IRP, please answer questions 3, 5, 6, and 8 for the NACIP program as well as for the IRP program.

Answer 10: Yes, the NACIP program is the Navy and Marine Corps name for the Installation Restoration Program.

NATIONAL WILDLIFE FEDERATION
1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

STATEMENT OF KENNETH S. KAMLET, ON BEHALF OF THE NATIONAL WILDLIFE FEDERATION, AT HEARING ON REAUTHORIZATION OF SUPERFUND, BEFORE THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS, UNITED STATES SENATE, May 23, 1984

Mr. Chairman and Committee Members:

My name is Kenneth S. Kamlet. I am Director of the National Wildlife Federation's Pollution & Toxic Substances Division. I appear on behalf of the Federation's more than 4 million members and supporters nationwide and our 51 state and territorial affiliates.

We appreciate the opportunity to present our views on one of the important issues this Committee and the Congress must address in reauthorizing and expanding the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly known as the Superfund Law: how to deal with the hundreds of inactive and abandoned hazardous waste sites owned or operated by Federal facilities and installations.

In addition to the Federation's lonstanding general interest in pollution control compliance by Federal facilities, we conducted a year-and-a-half-long study (under a grant from the Virginia Environmental Endowment) of Federal facilities in the Commonwealth of Virginia. The resulting 200-page report, Pollution Control Compliance by Federal Facilities in Virginia, was published in December, 1982.

I'd like to return to some of the findings of this study. First, however, I will provide some general background and observations.

Number of Superfund Sites on Federal Facilities

As of March 14th, there were 519 Federal installations listed on EPA's Emergency and Remedial Response Information System (ERRIS). The actual number of inactive hazardous waste sites subject to CERCLA evaluation could well be several times as large, since large Federal installations commonly contain multiple Superfund sites (in some cases as many as a few dozen per site). As of March 1982, Federal facilities had filed 696 Superfund notifications under Section 103(c) of CERCLA (based on GSA identification numbers), compared to over 11,000 notifications from non-Federal sources.

Under DOD's parallel Installation Restoration Program (IRP), which evaluates both Superfund and RCRA sites on military installations--but with more emphasis on active than on inactive sites--some 258 installations were undergoing assessment as of September 30, 1983, with the process ultimately expected to encompass 434 DOD installations. Preliminary EPA estimates indicate--based on multiple sites per installation (2.5 to 3 Superfund sites on average per installation)--that there are somewhere between 1,000 and 1,300 individual DOD Superfund sites throughout the country. Since DOD makes up about 80% of the Federal facilities on the ERRIS list, and assuming only 1 site per facility for non-DOD Federal facilities (obviously an under-estimate), a good (but probably low-end) estimate of the total number of all Federal facility Superfund sites in the country would

be in the 1,100 to 1,400 range--a sizable universe of sites.

Unfortunately, DOD's IRP process has so far (as of March 1, at least) yielded only 5 facilities that have progressed to the remedial design or construction phase, with only 46 of 258 facilities--less than 18%--having advanced beyond the earliest preliminary assessment phase. (In contrast, EPA's experience with private Superfund sites indicates that fully 30% of such sites that go through a Preliminary Assessment require a full-fledged Site Investigation).

Significance of Federal Superfund Sites

It is difficult to draw direct conclusions about the environmental or health hazard posed by Superfund Sites owned or operated by Federal facilities--in relation to that posed by private Superfund sites--because the process of comparing the two using a common Hazard Ranking System has only just begun (in March), in the wake of EPA's belated but welcome decision last September to begin considering Federal facility sites for inclusion on the Superfund National Priorities List (NPL). Unfortunately, the Defense Department has been able to come up with a list of only 24 installations--less than 6% of the installations targetted for IRP evaluation--for which enough data exist to allow them even to be scored under EPA's Hazard Ranking system, so that they can be considered for inclusion on the NPL. (We understand that some 26 additional DOD and non-DOD Federal sites have been nominated by the EPA regions for consideration during the current scoring process.)

Until many more Federal facility sites have been evaluated, scored, and the results made public, we are forced to rely on inferences and extrapolations from the meager information currently available. (Given the limited number of Federal sites being considered for the next update of the NPL in July, it is unlikely that our state of knowledge will be greatly enhanced in the near future.)

The potential hazard at least is very great, given the number and nature of highly hazardous materials that are routinely handled by DOD, the Department of Energy, and other Federal installations and facilities. For example, with respect to RCRA alone and for one military service, the Navy has estimated that "Navy ships and shore activities in the United States generate 19 million gallons of liquid hazardous waste and 35 million pounds of hazardous waste solids every year" and that "virtually every [Navy] facility that operates industrial processes or health-related services" generates these wastes. (Navy Hazardous Materials Management Guide, OPNAVNOTE 6240).

A Navy Hazardous Materials Management Guide (NESO 20.2-024A), prepared by the Naval Environmental Protection Support Service's Navy Environmental Support Office, includes a list [ATTACHMENT 1] of Federal Supply Classes known to contain hazardous items, said to provide "a valuable clue to the kinds of hazardous wastes generated at the activity." It also provides a list [ATTACHMENT 2] of hazardous wastes commonly found at Navy activities, to facilitate preparation of a hazardous waste inventory by each Navy activity. These lists further confirm the highly hazardous nature of the wastes

and by-products that can be generated at Federally owned and operated installations.

It is a little disconcerting that the only effort (that I know of, at least) made to date to compare the hazards of Federal and private Superfund sites was carried out by a contractor to the Chamber of Commerce of the United States--rather than by EPA or DOD. Risk Science International calibrated the Air Force's scoring protocol against the MITRE protocol (Hazard Ranking System) used by EPA, and then estimated the scores and ranks that the Air Force's top 100 sites of concern might get under the MITRE scoring. Their sobering conclusion was that all 100 of the Air Force's top 100 sites would have scored above the NPL cutoff score (of 28.5) and thus would have merited inclusion on the NPL. And 33 of the Air Force's top 100 sites, located at 9 separate Air Force installations (in California, Ohio, Texas, South Carolina, New York, Florida, Utah, and Oklahoma), would have been included among the top 40 NPL sites. (February 28, 1982, Letter from Linda A. Woolley of the Chamber of Commerce of the United States, to Russell H. Wyer, Director of EPA's Hazardous Site Control Division--commenting on Proposed Amendments to the National Oil and Hazardous Substances Contingency Plan).

However, despite the implication of the above analysis that a high proportion of DOD sites merit inclusion on the NPL (and, although a representative of a major EPA Superfund contractor, ICF, Inc., indicated at a conference in mid-October that "several hundred" Federal facility sites are likely to be added to the Superfund

cleanup task), I personally would be surprised to see very many Federal facility sites wind up on the NPL. I say this for two reasons. First, because Superfund money is not available to clean up NPL sites owned or operated by Federal facilities (but the clean-up must be paid for by the Federal facilities themselves), Federal Government agencies don't have the interest and incentive that State Governments do for private sites to maximize the number of sites listed on the NPL. Hence, there is less inclination to cooperate in prividing full and rapid access to information, to facilitate the NPL scoring and listing process, for Federal than for private sites. (For example, unfavorable data in draft reports is likely to stay in draft--undisclosed--form for long periods with little incentive to speed the issuance of inculpatory final reports).

Second, one of the limitations of the MITRE Model--the heavy weight it gives to high population density in the immediate vicinity of a Superfund site--has an even more drastic impact in artificially lowering the HRS scores of Federal facilities (particularly DOD sites, which tend to be large, sprawling sites, often isolated from civilian population centers) than for private Superfund sites. Although potable aquifers and productive surface waters may be in serious jeopardy on many Federal installations, such sites have a good chance of scoring below the HRS cutoff score and escaping NPL listing.

Conclusions From NWF's Study of Virginia Federal Facilities

We looked in some detail at information on 13 Virginia Federal facilities and concluded, based on an in-depth evaluation (frequently hampered by major information gaps), that sites at 9 military

installations in the state have "the potential to be highly hazardous to health and/or the environment."

We also drew some conclusions based on an evaluation of general hazardous waste management practices by the military services. I will mention only a few pertinent ones here:

1. DOD tends to give high priority for conducting assessments and cleanups to sites which may be transferred to other ownerships, while giving relatively short-shrift to the potential for on- and off-site impacts through migration of contaminants into ground and surface waters.

2. "Actual restoration" of a contaminated site will not even be considered unless there are firm plans to reuse or change the ownership of the site.

3. Unused hazardous materials are considered unregulated under RCRA until a decision is made to discard them (this could encourage protracted storage at unlicensed and substandard facilities of dangerous materials which are likely to be discarded eventually).

4. The prioritization factors used by DOD in making site assessment and restoration decisions do not explicitly address pathways for human exposure, such as proximity of disposal sites to potable ground or surface waters, or to productive shellfish beds, but merely consider an area's "environmental sensitivity."

5. DOD uses a non-standard substitute for the shipping manifest prescribed by RCRA--"Disposal Turn-In Documents" which accompany property turned in to the Defense Property Disposal Office--raising

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a significant potential for confusion on the part of disposal contractors who provide on- and off-site disposal services for DOD.

6. DOD separates responsibility for and custody of hazardous wastes, by considering the generating facility's responsibilities at an end once a Disposal Turn-In Document is given to the Defense Property Disposal Office--even though the location or custody of the hazardous waste remains unchanged (this may remove the incentive for responsible waste management and handling, or even for reporting leaks and other problems; and it may confuse Superfund and RCRA reporting to EPA and the States).

7. Needed corrective measures identified through IRP studies must be funded through normal appropriation accounts utilizing pollution abatement funds--a process that is uncertain and time-consuming. Funding sources for emergency clean-up and response actions on DOD facilities are unclear and may or may not be adequate for providing quick action. (The Navy's budget to do site assessment work was cut by two-thirds for FY '82 and was further cut in the FY '83 budget--we have not examined more recent budgets--straining the program's ability to accomplish its objectives, according to well-placed Navy sources).

8. A Navy directive (NAVSUP Notice 4400) specifies that only 8 groups of "pre-determined hazardous wastes" a far more limited list than that encompassed under RCRA, need be identified as "hazardous wastes" or be in DOT-specified containers when turned in to the Defense Property Disposal Office (this policy, apart from its questionable legality, can only promote under-estimation

of hazardous waste inventories on-hand and careless treatment of materials deserving and requiring the utmost of care).

9. Although the Clean Water Act prescribes that federal facilities must generally comply, both substantively and procedurally, with all federal, state, and local water pollution control requirements in the same way and to the same extent as any nongovernmental entity, the Navy has sought to insulate its "industrial operations" from priority toxic pollutant and industrial pretreatment responsibilities applicable to its private industry counterparts. The Navy has sought to disregard the so-called "primary industry criteria" of the Clean Water Act, by arguing that "Navy activities are not primary industries."

Policy Against Going to Court Against Non-Complying Federal Facilities

On matters of hazardous waste (and other pollution control) compliance, federal facilities, most notably Department of Defense (DOD) installations, have been notoriously reluctant to subject themselves to supervision by federal and state regulatory authorities. Although substantive compliance may be adequate (in some cases even exemplary), this is not always the case. And procedurally, non-compliance may be the exception rather than the rule. For example, as previously noted, DOD has insisted on the use of its own forms in lieu of Resource Conservation and Recovery Act (RCRA)-prescribed manifest forms, and has established its own "Installation Restoration Program" to take the place of normal "Superfund" hazardous waste site cleanup activities. (Within DOD, the Navy has its own version of this program: the "Navy Assessment and Control of Installation

Pollutants" [NACIP] program.)

DOD's sometimes cavalier attitude is perhaps not surprising in view of the facts that DOD does not regard environmental protection as a primary mission, and that EPA and the Department of Justice (DOJ) have a longstanding blanket policy against ever taking court action against non-complying federal facilities. Clearly, a polluting facility has little incentive to rectify deficiencies or to negotiate seriously when it knows that the responsible regulatory authorities have rendered themselves powerless to compel compliance by recourse to judicial enforcement action.

The policy against court enforcement has been in effect at least since February 15, 1979, when then-EPA Assistant Administrator for Enforcement, Marvin B. Durning, was told at a meeting with then-Assistant Attorney General for Land and Natural Resources, Jim Moorman, that "the Attorney General did not want to involve the Judicial Branch in resolving Executive Branch problems" and that, if EPA attempted to initiate legal action in its own behalf (even for the purpose of filing in court negotiated compliance schedules between EPA and non-complying federal facilities), "DOJ would intervene against EPA." (Durning Memo of March 12, 1979.)

More recently, in an October 11, 1983, letter to Representative John Dingell, in his capacity as Chairman of the Subcommittee on Oversight and Investigations of the House Energy and Commerce Committee, the Department of Justice (in a letter signed by Robert A. McConnell, Assistant Attorney General, Office of Legislative Affairs) took the position that "suing an agency of the United States"

is not among the "enforcement tools...necessary or appropriate for one unit of government to use against another" in the implementation of CERCLA or any other law (p. 5). The letter cited as the "most compelling common sense reason for not involving the judiciary in disputes within the Executive Branch," the willingness of Federal agencies to voluntarily pay their share of the costs attributable to the clean up of the site (p. 7). However, it is obvious that the voluntary approach, and informal negotiations between EPA and Federal agencies, are not likely to be nearly as effective if the responsible agency knows in advance that there is no possibility of court enforcement or legal accountability. Finally, among the arguments made in the Department of Justice letter is the proposition that it might well be unconstitutional (as not satisfying Article III's justiciability requirements) for one Federal agency to sue another (p. 2, et seq.). Given the fact that various Federal Agencies have often been on different sides of the same litigation, one would have to exalt the fiction of a monolithic Executive Branch over the realities of everyday life for such an argument to prevail.

Prior to this time, although an "escalation approach" was in place which emphasized administrative resolution of federal facility pollution problems, the policy was that if this did not succeed in securing compliance, or if "further problems develop from bad faith or negligent practices on the part of the Federal facility involved, stricter enforcement methods shall be considered including the issuance of an Administrative Order or the initiation of legal action under section 113 of the Clean Air Act or section 309 of the Federal

Water Pollution Control Act." (Memo of September 16, 1975, from Sheldon Meyers, Director, EPA Office of Federal Activities, to Regional Administrators, on "EPA Enforcement Activities Regarding Federal Facilities.") As recently as 1978 (undated memo from Marvin Durning, Assistant Administrator for Enforcement, and Peter Cook, Acting Director, Office of Federal Activities, to Barbara Blum, Deputy Administrator, on "Federal Facility Enforcement"), high EPA officials described "civil judicial actions" as "the bulwark of the Agency's enforcement program" and as "the normal remedy for serious violations and [a] necessary resort to require compliance with administrative orders against less serious violations." The same 1978 memo, while noting that "initiation of civil judicial actions against major Federal violators of State Implementation Plans under the Clean Air Act after August 8, 1977, appears to be mandated by the Clean Air Act Amendments of 1977," also noted that "it is not decided whether the Department of Justice will represent the Agency in an action against a Federal violator." (The February 1979 meeting apparently resolved the latter issue in the negative.)

As a strict legal matter, it is clear beyond any doubt that EPA and the Department of Justice have abundant authority (as well as the duty) to pursue enforcement actions against non-complying federal facilities to the same degree as for non-federal violators. Section 313(a) of the Clean Water Act, Section 107(g) of the "Superfund" law (CERCLA), Section 6001 of RCRA, Section 118 of the Clean Air Act, Section 4(b) of the Noise Control Act, and provisions of the Toxic Substances Control Act and the Safe Drinking Water Act

all specify that all agencies and branches of the federal government "shall be subject to, and comply with, all Federal, State, interstate, and local requirements, both substantive and procedural (including any requirement for permits or reporting or any provisions for injunctive releif and such sanctions as may be imposed by a court to enforce such releif), respecting control and abatement of [pollution] in the same manner, and to the same extent, as any person is subject to such requirements..." The only exemption authorized is one granted by the President where "he determines it to be in the paramount interest of the United States to do so."

On October 13, 1978, President Carter issued Executive Order 12088 ("Federal Compliance With Pollution Control Standards"). Although this Order formalized a several-step administrative procedure for resolving federal facility pollution compliance problems, with the Director of the OMB playing the ultimate dispute resolution role (Part 1-6), the Order makes clear that "these conflict resolution procedures are in addition to, not in lieu of, other procedures, including sanctions, for the enforcement of applicable pollution control standards" (Section 1-604). Notwithstanding this explicit "savings" provision, this Executive Order has been read by some officials as precluding judicial enforcement and as establishing an exclusive administrative procedure for resolving pollution control disputes.

Executive Order 12088 also directed each Executive agency to submit an "annual plan for the control of environmental pollution" to the Director of OMB, through the EPA Administrator. Several

informal attempts by the National Wildlife Federation (NWF) to obtain copies of such plans, both through OMB and EPA, were rebuffed, with OMB and EPA regarding the plans as privileged parts of the internal budget process.

In December 1980, during the presidential transition period, NWF prevailed upon the Chemical Manufacturers Association to formally recommend to the EPA transition team revisions to Executive Order 12088 which would expressly provide that: "Where a conflict is not resolved pursuant to these procedures within 120 days of the original notification, the Administrator, or at his request the Attorney General, shall initiate a civil action to establish an implementation plan for the Executive agency for coming into compliance with applicable pollution control standards." (December 11, 1980 Memo from David W. Carroll to G.V. Cox.) Unfortunately, no action was taken in response to this recommendation.

A recent (August 12, 1983) Memorandum of Understanding between the Department of Defense and the Environmental Protection Agency (relating to CERCLA -- the "Superfund" law) includes a section dealing with "resolution of interagency conflicts." Departing somewhat from the approach outlined in Executive Order 12088, this section specifies that "any conflict arising under this agreement will be resolved at successive levels of Agency decisionmaking until agreement is reached," with the matter being referred ultimately -- if necessary -- "to the EPA Administrator and the Secretary of Defense." The MOU cautions, however, that "the dispute resolution process is not a substitute for necessary and timely removal actions,

and each Agency reserves rights otherwise provided by law to pursue any response or enforcement actions." Similar language is found in an MOU entered into between EPA and the Department of Energy in February, 1984.

In March, 1983, NWF wrote then-EPA Administrator Burford and Attorney General William French-Smith, urging them to rescind the blanket policy against initiation of judicial enforcement actions against non-complying federal facilities. (March 4, 1983, letter from Jay D. Hair to Anne M. Burford and William French-Smith.) No response was ever received to this recommendation, although the October 11, 1983 letter to Congressman Dingell represents a clear reaffirmation of the previous policy.

Needed Reforms in Reauthorizing CERCLA

There are a large number of Federal facility Superfund sites, some of them representing potentially very significant problems. EPA has belatedly agreed to start scoring them for possible inclusion on the NPL, but information about them is very sparse and much of this information and the pace and extent of its public release are under the control of the Federal facilities themselves. The scoring process is proceeding very slowly. (At its present pace, it could take 30 years to complete.)

Because the Hazard Ranking System is weighted so heavily in terms of nearby population density, it is likely that many environmentally hazardous Federal facility Superfund sites (even where the potential for offsite migration of dangerous contaminant is high)

will receive low HRS scores and never make it on the NPL list.

Even the small proportion of Federal facility sites that do make it onto the NPL are under no compulsion to do an RI/FS (Remedial Investigation and Feasibility Study) of the sort that EPA requires and performs (through contractors) for all NPL-listed private sites.

Even where a Federal facility does make an assessment akin to an RI/FS--more likely a less rigorous and comprehensive Phase I and II IRP assessment (in the case of DOD)--it is conducted by or under the supervision of the Federal facility itself with no EPA input or supervision, except "at DOD's request and in its discretion" (in the words of the August 12, 1983 MOU).

If a clean-up plan or ultimate clean-up are inadequate at a Federal site, and negotiations and administrative efforts are unavailing, the Department of Justice has foreclosed the possibility of court enforcement under any circumstances.

Although the Justice Department has cited Executive Order No. 12146, providing for Justice Department mediation of legal disputes under RCRA and CERCLA, as obviating the need for court enforcement against non-complying Federal facilities, in the one recent case where this Executive Order was invoked (involving the Y-12 nuclear weapons facility at Oak Ridge), the Attorney General overruled DOJ's own Office of Legal Counsel and sided with the offending Federal agency (DOE).

Based on all of the foregoing, we have identified the following as needed and desirable CERCLA improvements:

1. Reaffirm the right and responsibility of EPA and DOJ to sue recalcitrant Federal facilities, with the defendant agency having to seek independent counsel (not DOJ). This is the approach taken in the Florio-Dingell "compromise" bill (H.R. 5640) on the House side (Section 407).

2. Reaffirm the requirement that the Hazard Ranking System be applied to all Federal facility Superfund sites (preferably in accordance with a prescribed schedule) for purposes of ranking them for inclusion on the National Priorities List; require all appropriate Federal facilities to then be included on the NPL (as EPA has already committed to do); and then require all Federal agencies with a site on the NPL to prepare an RI/FS study on that site. The original Lent bill (H.R. 4915)--now a dead letter, with Mr. Lent a cosponsor of H.R. 5640--would have required these things (except not in accordance with a prescribed schedule). The Florio-Dingell bill prescribes mandatory assessment and cleanup schedules (Section 111), seemingly for all sites, but leaves unclear whether it was intended to cover Federal facility Superfund sites. (Assessment and clean-up schedule requirements for Federal sites must be mandated in such a way that financial responsibility is not inadvertently shifted from the Federal facility to the EPA Administrator).

3. Provide clear EPA authority to carry out his own RI/FS study on a Federal facility where this is deemed necessary and make clear EPA's authority and responsibility to review and approve (including requiring improvements in) RI/FSs prepared by other Federal agencies. Where EPA intercedes and conducts its own RI/FS, it should have clear authority to recover the costs of such action from the concerned Federal facility (just as such costs are

recoverable against private parties). The Florio-Dingell bill currently makes provision for none of these changes.

4. Provide clear citizen suit authority under CERCLA to allow third parties to obtain court orders both directing EPA to take enforcement actions against non-complying Federal facilities and directing non-complying Federal facilities to bring their facilities into compliance. The Florio-Dingell bill (Section 301) would provide such citizen suit authority--except that, unless CERCLA is amended to more clearly specify a non-discretionary duty on EPA's part to pursue instances of non-compliance by other Federal agencies, a citizen suit to compel such enforcement action might be difficult to sustain.

5. Establish an explicit, high-visibility mechanism--including specific temporal milestones--for the negotiation of Superfund site cleanup agreements between EPA and other agencies (with the status of these efforts noticed in the Federal Register at prescribed intervals). If no agreement is reached, EPA should be required to pursue appropriate legal action against the non-complying Federal agency. Such an approach is taken in H.R. 4760, introduced by Congressman Jim Moody of Wisconsin, in the House, and in S. 2407, introduced by Senator Proxmire in the Senate.

We appreciate this Committee's efforts and interest in the Federal facility hazardous waste problem and look forward to working with it in perfecting appropriate legislative amendments.

Thank you for the opportunity to present these views.

ATTACHMENT I

FEDERAL SUPPLY CLASSES WITH HAZARDOUS ITEMS*

Federal Supply Classes with predominantly hazardous items:

FSC	Class Description
6810	Chemicals
6820	Dyes
6830	Gases; Compressed and Liquified
6840	Pest Control Agents and Disinfectants
6850	Miscellaneous Chemical Specialties
7930	Cleaning and Polishing Compounds and Preparations
8010	Paints, Dopes, Varnishes, and Related Products
8030	Preservative and Sealing Compounds
8040	Adhesives
9110	Fuels, Solid
9130	Liquid Propellants and Fuels, Petroleum Base
9135	Liquid Propellant Fuels and Oxidizers, Chemical Base
9140	Fuel Oils
9150	Oils and Greases: Cutting, Lubricating and Hydraulic
9160	Miscellaneous Waxes, Oils and Fats

Federal Supply Classes with some hazardous items:

FSC	Class Description	Hazardous Items
1370	Pyrotechnics	Warning fuse, fire starter
1375	Demolition Materials	Explosive device
2640	Tire Rebuilding and tire and tube repair materials	Some items containing flammable or toxic compounds
3439	Welding and Brazing supplies	Some items such as cleaners, acids, flux and supplies that contain or produce hazardous fumes
3610	Printing, duplicating, and bookbinding equipment	Flammable or toxic lithographic solutions
5610	Mineral Construction materials, bulk	Some items such as cutback asphalt, deck and floor covering, deck and surface underlay compound, sealing compound, flight deck compounds

*Extracted from Fed. Std. No. 313A, which governs the preparation of Material Safety Data Sheets.

FSC	Class Description	Hazardous Items
5640	Wallboard, building paper, and thermal insulation materials	Asbestos cloth which has loose fibers or flyings that may become airborne
6135	Batteries, Primary	Lead-acid, and mercury batteries and alkaline (with electrolyte)
6505	Drugs, Biologicals	
6750	Photographic Supplies	Some items containing hazardous chemicals, solvents, thinners, and cements
6780	Photographic sets, kits, and outfits	(See FSC 6750)
7510	Office Supplies	Some hazardous items, such as solvents, thinners, cleaning fluids, flammable inks and varnishes
8510	Perfumes, Toilet preparations, and powders	Shipping containers and pressurized containers with flammable propellants
8520	Toilet Soap, Shaving Preparations, and Dentifrices	(See FSC 8510)
8720	Fertilizers	Some items containing weed and pest control or other harmful ingredients, or because of their composition, are hazardous
9920	Smoker's Articles and matches	Lighter Fuel and matches only

OPNAVNOTE 6240 – ATTACHMENT 2 –

COMMON HAZARDOUS WASTES AT NAVY ACTIVITIES

Naval Shipyards*

Acids	Metal wastes	Ship wastes
Asbestos	Paint wastes	Solvents (e.g., degreasers)
Caustics	Plating wastes	Strippers
Mercury wastes	Sandblasting wastes (Organotin)	

Naval Air Rework Facilities**

Acids	Metal wastes	Solvents (e.g., degreasers)
Beryllium wastes	Paint wastes	Strippers
Caustics	Plating wastes	

Fuel Depots

Oily wastes	Tank bottoms	Waste fuels

Naval Weapons Stations

Ordnance wastes

All Activities

Battery acids	Disaster preparedness wastes (i.e., DS-2, DANC, STB, Ethylene Oxide)	Paint wastes
Boiler blowdown wastes		PCBs
Chemical cleaners		Pesticide wastes
Cooling tower bleedoff		Photographic lab wastes
Corrosion inhibitors	Firefighting agents	Oily wastes
	Hydraulic fluids	Miscellaneous chemicals (e.g., laboratory wastes)

*These wastes may also be found at some Naval Stations.
**These wastes may also be found at some Naval Air Stations.

OPERATIONS/PROCESSES AND RELATED HAZARDOUS WASTES

OPERATION/PROCESS	HAZARDOUS WASTES
Metal plating	Acids Pickling liquor Caustics Spent cyanide solutions Chromium wastes Other metal wastes
Degreasing	Solvents (e.g., trichloroethylene, trichloroethane)
Painting	Paint strippers Paint thinners Paint wastes (slops) Waste epoxy (resin)
Machine shops	Cutting oils Toxic metals
Miscellaneous ship repair wastes	Ripout wastes (asbestos) Sandblasting wastes (organotin) Welding wastes (acetylene sludge)
Miscellaneous aircraft repair wastes	Brake relining wastes (beryllium wastes) Metal stress and defect analysis wastes (fluorescent dye) Welding wastes (acetylene sludge)
Fuel storage and supply	Waste (or slop) oil Bunker oil Fuel waste Tank bottom sediment Tank cleaning sludges
Transportation	Waste oils Hydraulic fluids Battery acids Asbestos (brake linings) Ethylene glycol (coolants) Paint wastes Solvents
Pest control shop	Unrinsed pesticide containers Waste pesticides
Boilers	Blowdown wastes (e.g., hydrazine, morphaline) Feedwater chemicals Feedwater testing wastes (e.g., mercuric nitrate in submarines)

OPERATIONS/PROCESSES AND RELATED HAZARDOUS WASTES
(CONTINUED)

OPERATION/PROCESS (CONT.)	HAZARDOUS WASTES (CONT.)
Cooling towers	Bleedoff wastes Feedwater chemicals
Battery shop	Battery acids Alkaline battery fluid Heavy metals
Disaster preparedness	Bleach (STB) Decontaminating gases (ethylene oxide) Decontaminating liquids (DS-2, DANC)
Print shop, ADP center	Printing ink Data processing fluid
Other operations/processes	Ordnance wastes (e.g., TNT, RDX, picric acid, otto fuel) Photographic wastes Transformer fluids (PCBs) Industrial Waste Treatment Plant (IWTP) sludge Laboratory wastes Firefighting agents (e.g., AFFF) Chemical toilet waste Chemical cleaners

NATIONAL WILDLIFE FEDERATION
1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

June 15, 1984

The Honorable Robert T. Stafford
Chairman
Committee on Environment and Public Works
133 Hart Senate Office Building
Washington, D.C. 20510

Re: Supplemental Submissions for the Record/Superfund Hearing, May 23, 1984

Dear Mr. Chairman:

During the question period following my testimony before your Committee on May 23, I was asked to supply certain materials for the record. This is to comply with those requests.

Senator Mitchell asked me to "provide the Committee with an analysis of the legal and practical effect of the enactment of the Superfund Law after the issuance of...Executive Order [12088] and what impact it has on the Executive Order." Transcript, p. 52, lines 17-22. And, specifically, Senator Mitchell wanted to know whether the Executive Order provides a valid basis for the Department of Defense to exempt itself from any of Superfund's requirements. Transcript, p. 52, lines 2-7. Our legal analysis of this issue is provided in the accompanying memorandum, prepared by Elizabeth O'Brien on my staff. It is our conclusion that the Executive Order does not and could not operate to diminish the Department of Defense's responsibilities under the Superfund Law.

Senator Evans asked me, in addition, to substantiate the assertion in my prepared statement that Federal facilities may be less inclined than private ones "to cooperate in providing full and rapid access to information." (I had cited as an example the retention of unfavorable data in draft reports in draft form for long periods.) See, Transcript, pp. 49-51. I was asked to provide supporting information "more explicitly and in writing, so we have something in front of us." Transcript, p. 51, lines 10-12. The second memorandum

accompanying this letter seeks to address this issue. Although subsequent checking confirmed that various state agency and EPA officials have from time to time also experienced difficulty in getting information from DOD on hazardous waste sites, most of our contacts noted that relations with DOD have greatly improved over the past year or two.

I trust these materials are responsive to the requests made to me at the May 23rd hearing and that they are in time to be included in the hearing record.

Sincerely,

/Kenneth S. Kamlet

Kenneth S. Kamlet, Director
Pollution and Toxic Substances
Division

Attachments

cc: Senator George Mitchell
Senator Daniel Evans

KK/eh

NATIONAL WILDLIFE FEDERATION

MEMORANDUM

To: Kenneth S. Kamlet, Director, Pollution and Toxic Substances Division Date: June 15, 1984

From: Elizabeth O'Brien, Legal Intern EOB

Subject: Federal Facility Compliance Under Subsection 107(g) of CERCLA.

I. Statement of Facts

Subsection 107(g) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), generally extends the provisions of the Act to Federal facilities. It stipulates that such facilities must comply with the Act "in the same manner and to the same extent, both procedurally and substantively, as any non-governmental entity, including liability under [Section 107]."

This Federal facility compliance requirement stands in stark contrast with long-standing policies of the Environmental Protection Agency (EPA) and the Department of Justice (DOJ), which do not favor or permit the use of legal sanctions to compel Federal facility compliance with pollution control standards--a policy obviously not applicable to non-governmental entities. As recently reiterated, it is the Administration's position that "suing an agency of the United States" is not among the "enforcement tools necessary or appropriate for one unit of government to use against another" in the implementation of CERCLA or any other law. (October 11, 1983, letter from Assistant Attorney General Robert A. McConnell to Representative John Dingell.) Executive Order No. 12088 (Federal Compliance with Pollution Control Standards) was cited, among other authorities, in support of this position.

Executive Order No. 12088 was issued in 1978, prior to the enactment of CERCLA. It set out an administrative mechanism for resolving federal facility compliance disputes, requiring the Director of the Office of Budget and Management to act as an ultimate arbitrator. However, it is far from evident that this mechanism, by the terms of the Order itself, was ever intended to supersede other enforcement measures or to apply to all future environmental legislation.

II. Questions Presented

Is Executive Order No. 12088 applicable to CERCLA, a subsequently enacted statute, and if so, does its mechanism for dispute resolution preclude the use of legal measures to compel Federal facility compliance with CERCLA?

III. Brief Answer

Executive Order No. 12088 is totally silent as to its intended applicability to statutes enacted subsequent to its issuance. However, it clearly cannot be construed to preclude enforcement actions under Subsection 107(g) of CERCLA. Subsection 107(g) as a more recent and more specific expression of Congressional intent must be deemed to supersede any contrary intent under Executive Order No. 12088. Moreover, Executive Order No. 12088 contains an explicit savings provision which stipulates that it shall not supplant "other procedures, including sanctions, for the envorcement of applicable pollution control standards." (Section 1-604.)

IV. Discussion

Executive Order 12088 was issued pursuant to a general grant of executive authority in the Constitution, the statutes of the United States and provisions of the Toxic Substances Control Act (15 U.S.C.§2621), the Federal Water Pollution Control Act (33 U.S.C.§1323), the Safe Drinking Water Act (42 U.S.C.§300), the Clean Air Act (42 U.S.C.§748), the Noise Control Act of 1972 (42 U.S.C.§4903) and the Solid Waste Disposal Act (42 U.S.C.§6961) permitting the President to delegate responsibility for the administration of these Statutes. As such, the Order can and should be accorded the full force and effect of a statute. Old Dominion Branch No. 496, National Association of Letter Carriers, AFL-CIO v. Austin, 418 U.S. 264, n.5, 94 S. Ct. 2770, 2776, n. 5 (1974).

In construing the nature and purpose of a statute or executive order, it is critical to first consider the language of the statute itself. United States v. American Trucking Assn., 310 U.S. 534, 543, 60 S. Ct. 1059 (1939). Executive Order No. 10288 is entitled "Federal Compliance with Pollution Control Standards." Although the preamble indicates that executive authority to issue the Order is not derived solely from the statutes enumerated in the Order, it is not clear that the Order was intended to extend to subsequently enacted environmental legislation which similarly authorizes Executive administration.

In the absence of express language in the Order describing its scope, a second avenue of statutory interpretation is the legislative or "executive" history of an enactment. Church of the Holy Trinity v. United States, 143 U.S. 457, 459, 36 L. Ed. 226 (1892). President Carter issued a "Statement on Signing Executive Order 12088" and a "Memorandum for the Heads of Executive Departments and Agencies" when the Order was signed on October 13, 1978. Neither document, however, indicates whether the Order was intended to encompass subsequently enacted legislation.

Even assuming that Executive Order No. 12088 was intended to apply to subsequently enacted statutes, it is still necessary to determine if it conflicts with the provisions of Subsection 107(g) of CERCLA. Again applying the plain meaning rule, the Order provides

that administrative measures shall be used to "attempt" to resolve federal facility compliance disputes. This suggests that parties are always required--at least in the first instance--to submit to internal mediation. However, paragraph 1-604 stipulates such measures "are in addition to, not in lieu of, other procedures, including sanctions, for the enforcement of applicable control standards." If these provisions are read in concert, it appears that the Order could not have intended to provide an exclusive dispute resolution mechanism or to preclude the use of stricter measures if parties proved recalcitrant. Rather, the Order sought only to ensure that Federal agencies took seriously their pollution control responsibilities and that an earnest effort was made within the executive branch to resolve any pollution control problems.

The supporting documentation tends to confirm this interpretation. The President's "Statement on Signing Executive Order 12088" specifies that "Federal facilities must comply with the same Federal, State and local environmental standards, procedural requirements and schedules for cleanup that apply to individual citizens and corporations."

In more general terms, the interpretation of Executive Order No. 12088 which DOJ has elaborated is not sound. A cardinal principle of statutory interpretation is that the more recent of two conflicting statutes is controlling. Sutherland on Statutes and Statutory Construction, §§ 51.02 (4th ed., 1973). Furthermore, a "specific" statute will generally be given precedence over a more general one, regardless of temporal sequence. Busie v. U.S., 446 U.S. 398, 100 S. Ct. 1747 (1980).

In this instance, the liability provisions of CERCLA (including the Federal agency comparability requirement) clearly provide a more specific statement of how violations of this particular Act are to be treated than do the general provisions of Executive Order 12088. It can also be assumed that Congress was aware of Executive Order 12088 when it enacted CERCLA and either considered it reconcilable or intended to reiterate Congressional intent not to accord Federal facilities special treatment. Cannon v. University of Chicago, 441 U.S. 677, 99 S. Ct. 1946 (1979).

In sum, it is always preferable to construe conflicting statutes as reconcilable, Watt v. Alaska, 45 U.S. 259, 101 S. Ct. 1673 (1981), and the mere fact that new legislation alters prevailing law is not or should not be grounds for undue concern. T. Sedgewick, The Interpretation and Construction of Statutory and Constitutional Law, §§ 104 (2d. Ed. 1874). All new legislation tends to modify previous legislation to at least some degree. Executive Order No. 12088 need not be read to preclude the use of legal enforcement measures under Section 107(g) of CERCLA. Nor is it necessary to interpret Section 107(g) as a repealing provision. Rather, the two may be harmonized by interpreting Executive Order No. 12088 as a dispute mechanism which supplements, not precludes, the use of other mechanisms.

The EPA and DOJ insistence on a contrary reading of the statute and the order controvenes the intent of each. It renders portions of both ineffective and nugatory and thus clearly runs counter to general principles of statutory interpretation. Bird v. United States, 187 U.S. 118, 124, 23 S. Ct. 212 (1902).

NATIONAL WILDLIFE FEDERATION

1412 Sixteenth Street, N.W., Washington, D.C. 20036 202—797-6800

MEMORANDUM

TO: The Honorable Daniel Evans DATE: June 15, 1984

FROM: Kenneth S. Kamlet, Director, Pollution & Toxic Substances Division

SUBJECT: Supplemental Information on Problems in Gaining Access to Information from DOD on Hazardous Waste Sites

Background

At the Senate Environment Committee's May 23rd hearing on Superfund, you asked me to elaborate on assertions contained in my prepared statement, ascribing to Federal Superfund sites a lesser willingness to cooperate in providing full and rapid access to information than in the case of private sites (where applicable legal imperatives operate with greater force). See, Transcript, pp. 49-51. This Memorandum responds to your request.

Federal Facilities in Virginia

Between March 1981 and December 1982, the National Wildlife Federation carried out a study of Federal facility pollution control compliance in Virginia with emphasis on hazardous waste compliance. Throughout this study, the Department of Defense was less than enthusiastic about complying with our requests for information.

For example, in response to our circulation of a short questionnaire to DOD and other Federal installations in Virginia, we received a letter from a Deputy Assistant Secretary of Defense (Robert A. Stone), declining to allow DOD installations to fill out our questionnaire or to supply any information other than forms and applications already provided "to the appropriate regulatory agencies." The letter noted further that "DOD will comply first with information requests which regulatory agencies require and which are directed to all regulated entities" and that "additional information requests will be handled on a case-by-case basis." None of the non-DOD facilities to whom we sent the same questionnaire had any problems with responding. A copy of Deputy Assistant Secretary Stone's August 5, 1981, letter is attached to this Memo.

In addition to this instance, both I and the Director of the grant-funded Virginia study project--Dr. Senta Rogers, who is no longer associated with the National Wildlife Federation--recall that we were repeatedly denied access to Installation Restoration Program

(IRP) reports for Virginia DOD installations on the ground that they were in "draft" form and could not be released until they were finalized. The reports that we sought remained in draft form, despite repeated requests for a releasable version, throughout much of the 20-month duration of our grant. To the best of my recollection we never did receive them and had to proceed as best we could without them. Unfortunately, I was unable to locate the two-year old files which would substantiate these recollections.

Federal Facilities in California

Mr. David Miller, District Representative in Congressman Matsui's Sacramento office, confirmed my statement about the "hesitancy" of DOD to release information about hazardous waste sites on Federal facilities, in connection with at least two California installations: McClellan Air Force Base and the Sacramento Army Depot. In the case of McClellan, a task force of state agencies was repeatedly rebuffed from 1982 on in its efforts to obtain information on where groundwater samples analyzed by the Air Force had come from. The Air Force withheld the data on the basis that it was in "draft" form. It was not until after the Air Force inaugurated a new policy of cooperation with state and local agencies on June 6, 1983, that the requested information was supplied. (An official with the California Department of Health Services independently confirmed that the Air Force had withheld information from the State regarding McClellan Air Force Base and a problem of contaminated offsite drinking water wells on the basis that the information was in "draft" form.)

In the case of the Sacramento Army Depot:

--The Army has acknowledged that it has hazardous waste sites on the facility, but says that it "can live with them";

--The Army denies that hazardous waste has spread to off-site locations; and

--The Army refuses (to this day) to release any of its tests.

Federal Facilities Generally

An EPA Superfund staffer (involved in the assembly of information for the scoring of DOD sites for possible inclusion on the National Priorities List) told me that, although the working relationship between EPA and DOD was now pretty good, he was aware of a number of instances in which Installation Restoration Program data were withheld from EPA on the basis that they were contained in draft reports which had not yet been fully reviewed by DOD. One example that he recalled of this involved the Volunteer Army Ammunition Plant in Chatanooga, Tennessee.

Conclusion

I did not intend in my testimony to place major emphasis on problems in securing information from DOD. The main contentions and recommendations in my testimony are fully supportable on entirely independent grounds. The situation, moreover, has clearly improved since we completed our Virginia study in late 1982 (probably in no small measure as a result of the elevation of Lt. Col. Peter Daley to be Director of Environmental Policy for DOD). I remain convinced, however, that it continues to be somewhat more difficult to obtain access to DOD data on hazardous waste sites than to comparable data for private sites, which are more clearly and more closely subject to EPA and State agency jurisdiction and supervision.

Attachment

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301

MANPOWER, RESERVE AFFAIRS AND LOGISTICS

5 AUG 1981

Mr. Kenneth S. Kamlet
National Wildlife Federation
1412 Sixteenth St., N.W.
Washington, D.C. 20036

Dear Mr. Kamlet:

This is in response to your letter of July 24, 1981, concerning a questionnaire on Virginia federal facility pollution control compliance. We have marked-up and enclosed the draft questionnaire as you requested.

As for asking Department of Defense (DoD) installations to complete the questionnaire, we believe that our compliance with applicable federal, state, and local regulations can be determined through your review of notification forms and permit applications which our installations have provided to the appropriate regulatory agencies. Should you forward this questionnaire to Defense installations, we will encourage our installations to provide you copies of notification forms or permit applications, which are readily available, as time and resources permit.

As was discussed during your meeting with Dr. Don Emig on May 14, 1981, DoD will comply first with information requests which regulatory agencies require and which are directed to all regulated entities. Additional information requests will be handled on a case-by-case basis.

Thank you for the opportunity to review your draft questionnaire. If you would like to discuss this matter further, please contact Dr. Don Emig at (202)695-7820.

Sincerely,

Robert A. Stone
Deputy Assistant Secretary of Defense
(Facilities, Environment, and Economic Adjustment)

Enclosure

cc: CASA(IL&FM)
ASN(S&L)
SAF/MIQ

ATLANTIC RICHFIELD COMPANY TESTIMONY

ON

REAUTHORIZATION OF

THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION

AND LIABILITY ACT OF 1980

SENATE ENVIRONMENT COMMITTEE

MAY 23, 1984

My name is Harold A Sorgenti. I am a Senior Vice President of Atlantic Richfield Company and the President of ARCO Chemical Company. I am here to testify on reauthorization of the hazardous substances superfund law, both as a representative of our Company, and on behalf of several thousand fellow employees who will be affected by this legislation.

In recent months, spokesmen from many different interests have discussed the need for a comprehensive federal program to clean up hazardous waste sites and to provide remedial action for the release of hazardous substances into the environment. The Atlantic Richfield Company has been prominent in these discussions and has supported the continuation of a fund to pay for these environmental clean-up activities where no responsible parties can be found. We continue to advocate this principle and are prepared to offer additional specific suggestions to supplement our previous discussion of taxation mechanisms for support of the fund.

However, we must also voice our concern and opposition to legislative proposals that would vastly increase the rate of the feedstock tax used to finance superfund. A multiplication of the feedstock tax would have a disastrous impact upon the United States petrochemical industry and the thousands of jobs that it supports. Due to the seriousness of this issue, I would like to address it first in my testimony.

The United States petrochemical industry may be defined as the companies and

workers who produce eleven organic chemical feedstocks which are currently subject to the federal superfund tax. These chemicals are:

Acetylene
Benzene
Butadiene
Butane
Butylenes
Ethylene
Methane
Naphthalene
Propylene
Toluene
Xylenes

Over the past several years, this industry has suffered from both overcapacity, and significantly increased costs for the petroleum fractions and natural gas streams used in production. Annual growth in the industry has dramatically slowed from levels in excess of 10% down to about 3-4% per year.

Profit margins on many products were reduced or eliminated during the recent downturn. It is estimated that the petrochemical industry lost $350 million to $400 million in 1982. The industry continued to operate at a loss in 1983 and just improved to the break-even level in the first quarter of 1984.

As a producer with about 6-8% share of the petrochemical market, ARCO Chemical's performance was consistent with the rest of the industry. Like several other producers, we were forced to shut down a number of facilities

producing petrochemicals or their derivatives.

However, despite these difficulties, Treasury Department data show that superfund tax payments made by the petrochemical industry average $155 million per year.

It should be noted that these taxes were paid mainly by the producers of the eleven chemicals, with only partial tax cost passthrough. They are based upon the rates contained in the superfund legislation passed in 1980 and represent 66% of all the money that the Treasury Department reported as being collected. It should be noted that in addition to paying taxes into superfund, these same companies pay clean-up costs directly when they are identified as responsible parties.

Some legislation would now increase the tax rates on these chemicals by factors ranging from 300-600%. The legislation's sponsors have apparently assumed that the petrochemical industry can continue to bear approximately two-thirds of an expanded annual revenue objective of $1.5 billion or so.

Unfortunately, this assumption is erroneous. The increased tax rates will instead force a reduction in the petrochemical tax base through plant shutdowns and the export of the manufacture of these chemicals and their downstream derivative products to resource rich foreign countries. Ironically, we will be damaging one of the few industries that provides this nation with a superior technological position and a positive balance of payments. When this occurs, the base for collecting the tax will be significantly eroded, leaving us with a shortfall that will have to be secured from other sources.

Thus, the real results of this legislation will be a less effective program for funding dumpsite cleanup, and the destruction of the domestic petrochemical industry, coupled with the loss of thousands of manufacturing jobs.

Some specific points to substantiate this conclusion follow:

1. Increased tax rates exceed profit margins.

Historically, profit margins in the entire chemical industry have ranged between 5% and 6%. More narrowly, profits in the petrochemical industry have not reached even these levels. Proposed of increased taxes say that the tax rates on the eleven petrochemicals are equivalent to 3% of their sales price. This is not the case. Actual data show that the proposed rates amount to 5-6% of sales prices, a rate that exceeds the best profit margin that the petrochemical industry can hope to realize. In other words, these rates will essentially tax away any incentive to stay in this business.

2. A free market will not allow tax cost passthrough.

In an industry with substantial excess production capacity, it is not possible for producers to pass on the superfund tax to their downstream customers. For example, domestic production capacity for the chemical ethylene is about 40 billion pounds per year. In 1982, ethylene sales were about 23 billion pounds. In 1983, sales were 28 billion pounds, and demand during 1984 is projected to be 30 billion pounds. In this type of business environment, market pressures, including foreign imports, will inevitably

force domestic producers to absorb the cost of the tax.

3. The "deep pocket" theory will not work.

Only 12 companies pay almost 70% of the superfund taxes currently collected. These same companies all have petrochemical manufacturing operations which represent between 5-20% of their capital assets. These companies are all profitable when considered from an overall business standpoint. However, it is unrealistic to expect the management and stockholders of these companies to continue to manufacture petrochemicals when these operations can only be expected to generate continuing losses, and are not essential to the companies' overall viability. As I previously stated, we have shut down petrochemical and derivative manufacturing operations when we have been forced to do so by adverse market conditions, leading to a significant personnel reduction of nearly 40%. It does not seem prudent public policy to exacerbate this circumstance by imposing an artificial economic burden through a massive increase in the feedstock tax.

4. The tax rates are based on economic assumptions that ignore the global nature of the petrochemical industry.

Do not forget that we are competing in a worldwide industry. We should treat our domestic capacity as a vital national asset. It produces a positive balance of trade for this country. The technological position we have worked so hard to develop in this country allows us to deliver product to international markets more cheaply than our international competition. Independent consultant studies indicate this advantage of U.S. productive capacity would be eliminated by the proposed increase in the feedstock tax. The

result will be a loss of the positive flow of trade dollars. Also, an equally detrimental effect will be the increase in imports of petrochemical derivatives. Shutdowns of U.S. capacity would just assure that we export more future production capacity as resource-rich foreign countries fill the void. Already, the planned start-up of Middle Eastern plants that could export derivative products to the U.S. without paying the superfund tax places our industry under extreme pressure. Upping the feedstock rates even further will guarantee that we lose our trade edge.

5. The tax unfairly penalizes an extremely narrow industry segment.

Any law which places most of the burden for funding a national priority on 12 companies is at best grossly unfair and destructive for the taxed business segments, their employees, and the economies of the states where these businesses are located.

An analysis of available data for waste disposal sites currently on the national priority list indicates that responsibility for problems which require clean-up are much more widely distributed that the current tax burden suggests.

Considering the SIC code of companies identified as responsible parties at NPL sites:

- Companies within the chemical and allied products industry were identified at only 18% of the sites.

- Companies within the petroleum refining industry were identified at only 5% of the sites.

- Over half the identifiable companies involved with NPL sites are not subject to the superfund tax. This includes companies in the lumber and wood products, electrical equipment, and electronics industries, for example.

To reiterate, we support the reauthorization of a fund to clean up abandoned dump sites. We will also support expansion of this fund it if can be shown that additional monies are required to adequately address this problem and can be spent in a responsible manner.

However, we are unable to support the continuation or expansion of a funding mechanism that places extraordinary burdens on a narrow segment of industry, which is grossly inequitable, and which will destroy an industry that provides jobs and trade dollars to this country. The abandoned hazardous site problem belongs to the entire society. Everyone has benefitted, directly or indirectly, from the savings produced by past improper disposal practices. For this reason, we must move to a broader funding base for the superfund.

In the remainder of my testimony, I would like to suggest an alternate, more equitable funding concept which avoids the adverse consequence of an increased feedstock tax.

Funding

We recommend to you today that Congress adopt for the present fund, or for an expanded fund, a dedicated gross receipts tax on all businesses filing a U.S.

corporate income tax form (1120) having in excess of $50 million in receipts annually. In addition, we recommend that Congress provide a direct economic incentive for proper hazardous waste management by imposing a tax on hazardous wastes currently subject to the Resource Conservation and Recovery Act (RCRA).

Based on latest available Treasury Department statistics, a gross receipts tax would fall on approximately 8,200 businesses, a relatively small number of taxpayers, considering the magnitude of the proposed increase in the present bill.

The 8,200 businesses reported gross receipts in 1980 of $3.7 trillion, a healthy basis for guaranteed revenue generation that is unlikely to decline significantly, given current and projected economic growth rates. Consequent economic dislocation of such a tax would be nearly unmeasurable. For example, using 1980 statistics, a tax rate of two one-hundredths of 1 percent on gross receipts of subject businesses would produce revenues of about $750 million annually, a rate approximately equal to $2 per $10,000 in receipts. By contrast, the tax rate on petrochemicals in one leading bill (H.R. 5640) is the equivalent of 6% of the sales price, of ethylene and propylene, for example, a rate that is more than 200 times greater than that in our tax proposal. Additionally, the gross receipts tax would fall equally on foreign and domestic businesses, because any entity with more than $50 million in gross receipts that files a corporate income tax form in the United States would be subject to the proposed superfund tax.

I might mention here that, in response to concerns raised by some who have examined our proposal, we have built into the tax an exclusion for receipts derived by U.S. taxpayers from exclusively foreign operations, for the obvious

reason that they have essentially no domestic impact.

The dedicated gross receipts tax could be applied in an administratively simple manner. Gross receipts are already reported on corporate income tax forms. It would be relatively easy to require subject corporations to compute a dedicated gross receipts tax by using data found on the existing reporting form and amending the computation schedule now used to calculate gross receipts. Addition of the dedicated gross receipts tax to the corporate income tax form would further ensure simplicity by levying the tax in a consolidated fashion: the tax would be paid by parent corporations, rather than by individual subsidiaries. Consolidated taxation also would foreclose a potential loophole for businesses which might be comprised of a host of subsidiaries that, individually, produce less than $50 million in receipts annually.

It is important to note further that the first $50 million in receipts for every business would be excluded.

The gross receipts tax, which would replace the current crude oil/feedstock tax entirely, would be explicitly dedicated in the statute to the financing of the Hazardous Substances Response Fund created by section 221 of CERCLA. In no way should the tax be construed to produce general revenues for the U.S. Treasury.

Furthermore, it should be emphasized that replacement of the crude oil/feedstock tax with the dedicated corporate gross receipts tax would not allow currently taxed entities to escape taxation for fund purposes. Every one of the major CERCLA taxpayers would be subject to the gross receipts tax that we have described. The amount of taxes paid by Atlantic Richfield Company under our proposal would not differ significantly from our current CERCLA tax

burden.

As currently constructed, CERCLA provides no incentives that will aid in preventing future hazardous substances problems by reducing the total volume of wastes disposed on land. Thus, the job of cleaning up leaking hazardous waste dumps may never be finished. Regulatory requirements alone do not produce adequate inducement for development and use of alternatives to land disposal of hazardous waste. Consequently, Atlantic Richfield recommends that Congress amend CERCLA to provide for a waste-end tax that would apply to any waste:

> Having the characteristics identified under section 3001 of RCRA, as in effect on the date of enactment of CERCLA amendments (other than waste the regulation of which has been suspended by Act of Congress on that date), or
>
> Subject to the reporting or recordkeeping requirements of sections 3002 and 3004, as so in effect.

Exemptions from the tax would be provided for alternative management of subject wastes through reuse, recycling, treatment, and incineration. Obviously, alternative management processes can be expected to produce some hazardous residues that will require land disposal. Such residues would be subject to the waste-end tax.

The tax would be paid by disposers. That is, in the case of on-site disposal, the generator would pay the tax. In the case of wastes submitted for off-site disposal, the tax would be paid by the disposal facility operator. We have built into our proposal a mechanism to ensure that a credit is passed back to

generators for any waste submitted for offsite disposal that is rendered benign through alternative waste management. In this way, the economic incentive for moving away from land disposal is preserved.

As a part of our submission for the record, we are providing today specific legislative language for implementation of both the gross receipts tax and the waste-end tax.

The statistics on the current and potential economic conditions faced by the petrochemical industry as a result of superfund taxation have been tested and found valid by private economic experts, including Professor William Nordhaus of Yale University. We are continuing to work with these outside experts to further define the economic penalties imposed by the feedstock tax and to test the economic viability of the gross receipts and waste-tax proposals our Company supports. We will be happy to supply you with this additional information as it becomes available.

Taken together, the gross receipts and waste-end taxes fully meet the five criteria Congress established for a workable superfund: guaranteed revenues, administrative simplicity, minimal economic dislocation, equity, and incentives for alternatives to land dispoal. Indeed, Atlantic Richfield Company believes the gross receipts/waste end tax does a significantly better job of meeting the criteria than does the crude oil/feedstock tax, which falls very short on most of the criteria.

Superfund Cleanup Standards

Turning to proposals to specify superfund cleanup standards, it is our

understanding that several congressional committees have asked the Office of Technology Assessment (OTA) to develop a report on this issue. We further understand that a review is underway by the National Academy of Sciences. We urge Congress to delay any action on cleanup standards until those studies have been completed.

Underground Storage Tanks

For some time, Atlantic Richfield has been concerned about the potential problems that can be associated with underground storage tank systems. Of particular concern are underground tank leaks that could affect groundwater quality. In that regard, we place major emphasis on our voluntary leak prevention program. It is our position that liability for underground storage tanks be imposed on the owner of the tank and not the manufacturer of the petroleum product.

Furthermore, we recommend that a separate fund be established regarding leaking tanks under a wholly different statute, such as the Clean Water Act, or as a designated portion of the CERCLA fund. The administrative mechanism for responding to such releases also should be separate. If the leaking tank response problem is included in CERCLA, the liability provisions should be structured so as to distinguish between wastes, where some rationale for generator liability has been established, and materials with economic value. There is no rationale for manufacturer liability regarding non-waste materials which are not within its ownership or control at the time of the release.

Modifications to the "petroleum exclusion" in CERCLA should be carefully structured so that only fuels and other finished petroleum products such as

solvents are no longer covered by the exclusion. Crude oil and gasoline blending stocks would remain subject to the "petroleum exclusion."

We do not believe that underground tank standards should be included in CERCLA. Rather, we urge that uniform, stringent underground storage tank performance standards be authorized under another statute, such as RCRA. Specific control measures should be administratively established and be sufficiently flexible to accommodate varying installation conditions. However, the statute should mandate that the standards apply to all fuel and other finished petroleum product tanks, regardless of the financial condition or size of the owner or other factors.

Finally, the funding mechanism, administrative procedures and tank standards for fuels and petroleum products should be preemptive of state or local actions even though the federal activities as to releases of waste and other materials are not.

Citizen Suits

We are concerned with and oppose addition of citizen suit provisions to CERCLA. Effective implementation of CERCLA requires and will continue to require the exercise of great discretion on the part of enforcing agencies. The exercise of this discretion has necessarily led to the current situation involving substantial delays in site cleanups. Citizen suits can only worsen the situation.

Victim Compensation

Turning to the subject of victim compensation, Atlantic Richfield has considered the issue of compensation for exposures to hazardous substances for some time. We have concluded that passage of federal legislation to compensate persons for non-workplace exposures to hazardous substances is premature.

Conclusion

Obviously, we have addressed a number of issues that are quite complex. For the reasons stated, we cannot support proposals to multiply the feedstock tax. Simply put, increases will force a shutdown of substantial portions of ARCO Chemical Company, as well as much of the remainder of the taxpaying chemical industry. Adoption of the gross receipts/waste end tax can ensure a steady stream of revenues for cleanup of abandoned hazardous waste dumps with a minimum of economic dislocation. We urge your careful consideration of our proposal as an affirmative method for solving a critical environmental problem in a manner that spreads the costs more equitably across all of society.

Atlantic Richfield Company
May 23, 1984

Atlantic Richfield Company

Recommended Legislative Language

On

A Gross Receipts Tax

And

A Waste-End Tax

To

Finance the Hazardous Substances Superfund

TITLE III AMENDMENTS RELATING TO IMPOSITION OF EXCISE TAX ON CERTAIN RECEIPTS BY CORPORATIONS

SEC. 1. Amendment of 1954 Code - Except as otherwise expressly provided, whenever in this title an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of the Internal Revenue Code of 1954.

SEC. 2. Repeal of taxes on petroleum and certain chemicals and imposition of tax on certain receipts by corporations.

(a) Chapter 38 (relating to environmental taxes) is amended by repealing Subchapter A (relating to a tax on petroleum) and Subchapter B (relating to a tax on certain chemicals), and by adding the following new Subchapter.

Subchapter A - Excise Tax on Certain Receipts By Corporations

SEC. 4605 IMPOSITION OF TAX

(a) General Rule. There is hereby imposed an excise tax of .04% on all taxable gross receipts by every corporation during the taxable year.

(b) Special Rule for Affiliated Groups. Under regulations prescribed by the Secretary, the members of an affiliated group shall compute their taxable

gross receipts on a consolidated basis, regardless of whether the affiliated group files a consolidated federal income tax return pursuant to section 1504 et. seq. of this title for the taxable year.

(c) The tax imposed by this section shall not apply to receipts by corporations which are exempt from federal income tax under section 501(a) of this title.

(d) The taxes collected by the Treasury under this section shall be appropriated to the "Hazardous Substance Response Fund" pursuant to section 9631 (b)(1)(A) of Title 42 of the United States Code.

(e) The tax imposed by this section shall terminate on _____.

SEC. 4604. DEFINITIONS

For purposes of this subchapter -

(1) Taxable gross receipts. The term "taxable gross receipts" means all gross receipts, without any deductions, in excess of $50,000,000, from all trade or business operations. For this purpose, "gross receipts" does not include receipts which constitute:

(a) dividends, including all amounts which are treated as dividends received under subtitle A of this title

(b) interest

(c) rents

(d) royalties

(e) receipts from sale, exchange or involuntary conversion of a capital asset

(f) receipts from sale, exchange or involuntary conversion of property used in the trade or business

(g) amounts included in income under section 951 of this title

(h) amounts which are not treated as gross income under section 61 this title

(i) refunds of taxes deducted in prior years

(j) amounts received from members of the taxpayer's affiliated group

(k) amounts which are treated as income from sources without the United States under section 862(a) or section 863 of this title and the regulations promulgated thereunder

(2) Capital asset. The term "capital asset" has the same meaning as that defined in section 1221 of this title.

(3) Property used in the trade or business. The term "property used in the trade or business" has the same meaning as that defined in section 1231(b) of this title.

(4) Taxable year. The term "taxable year" means a corporation's taxable year under section 441(b) of this title.

(5) Affiliated group. The term "affiliated group" has the same meaning as that defined in section 1504(a) of this title.

(b) Subchapter C of Chapter 38 (relating to tax on hazardous wastes) is redesignated as Subchapter B of such chapter.

TITLE IV CONFORMING AMENDMENT RELATING TO HAZARDOUS SUBSTANCE RESPONSE FUND

SEC. 401. AMENDMENT OF AMOUNTS APPROPRIATED TO THE HAZARDOUS SUBSTANCE RESPONSE FUND - Section 9631(b)(1)(A) of title 42 is amended by striking out "section 4611 or 4661 of Title 26" and adding "section 4605 of Title 26".

II

WASTE TAX BILL

"Chapter 38 of the Internal Revenue Code of 1954 is amended by inserting after Subchapter C the following new subchapter:

"Subchapter D - Tax on disposal and long-term storage of hazardous wastes

"Section 4691. Imposition of Tax

"Section 4692. Definitions

"Section 4693. Administration and Enforcement

SECTION 4691 IMPOSITION OF TAX

"(a) GENERAL RULE - There is hereby imposed a tax on the disposal offsite or the disposal onsite of hazardous waste which is listed or identified under Section 3001 of the Solid Waste Disposal Act, as amended. For the purposes of imposition of the tax under this Section, long-term storage of hazardous waste listed or identified under Section 3001 of the Solid Waste Disposal Act, as defined herein, shall be treated as disposal.

"(b) AMOUNT OF TAX

The amount of tax imposed by subsection (a) shall be:

(1) $20 per ton (total wet weight basis) on Acutely Hazardous

Wastes, as defined.

(2) $10 per ton (total wet weight basis) on Regular Hazardous Wastes, as defined.

(3) $1.00 per ton (total wet weight basis) on Aqueous Hazardous Waste, as defined.

(c) EXCLUSIONS AND LIMITATIONS

(1) No tax shall be imposed under subsection (a) on the disposal onsite or disposal offsite of any solid waste the regulation of which as of January 1, 1984, is suspended under Section 3001 of the Solid Waste Disposal Act, as amended. In the event that the Administrator determines, pursuant to Sections 8002 and 3001 of the Solid Waste Disposal Act, as amended, to promulgate regulations under Subtitle C of said Act for such wastes, then the Administrator shall transmit to both Houses of Congress such determination. No tax shall be imposed on such waste unless authorized by Act of Congress.

(2) In the case of any hazardous waste listed or identified under Section 3001 of the Solid Waste Disposal Act, as amended, which is removed from such listing or identification, the tax imposed under subsection (a) shall cease to apply on the effective date of such removal. In the case of long-term

storage of any such removed waste, no period of storage after the effective date of such removal shall be taken into account for purposes of the tax imposed under subsection (a).

(3) Except as provided in subsection (c)(1), in the case of any hazardous waste which becomes listed or identified under Section 3001 of the Solid Waste Disposal Act, as amended, after the effective date of this Act, the tax imposed under subsection (a) shall take effect on the effective date of such listing or identification. In the case of long-term storage of any such listed or identified waste, no period of storage before the effective date of such listing or identification shall be taken into account for purposes of the tax imposed under subsection (a).

(4) No tax shall be imposed upon the redisposal of any hazardous waste which is generated as the result of any removal or remedial action conducted pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended.

(5) No tax shall be imposed upon the disposal offsite or the disposal onsite of any hazardous waste at a certified hazardous waste management facility.

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(d) LIABILITY FOR TAX

The tax imposed pursuant to subsection (a) shall be imposed:

(1) In case of disposal at a qualified hazardous waste disposal facility, or long-term storage at a qualified hazardous waste storage facility, upon the owner or operator of such facility, and

(2) In the case of disposal other than at such a facility, upon the person disposing of or storing long-term the hazardous waste.

"(e) NO DOUBLE TAXATION

The tax imposed under subsection (a) shall not be imposed again on any hazardous waste, or portion thereof, which is removed subsequent to payment of the tax imposed under subsection (a) to another place for disposal or storage.

(f) FRACTIONAL PART

"(1) In the case of a fraction of a ton, the tax imposed under subsection (a) shall be the same fraction of the amount of such tax imposed on a whole ton.

(2) The taxes imposed under subsection (a) shall not apply to any amount of waste disposed or placed in long-term storage prior to the effective date of this Act.

(g) EFFECTIVE DATE AND TERMINATION

The tax imposed under subsection (a) shall become effective on October 1, 1985 and shall not apply after September 30, 1990, except that if on any September 30 prior to such date:

(1) The unobligated balance in the Hazardous Substance Response Trust Fund as of such date exceeds $1,000,000,000, and

(2) The Secretary, after consultation with the Administrator, determines that such unobligated balance will exceed $500,000,000 on September 30 of the following year if no tax is imposed under this Act during the calendar year following, then no tax shall be imposed by this section during the first calendar year beginning after such September 30.

SECTION 4692 DEFINITIONS

(a) For purposes of this Subchapter :

(1) Administrator - The term "Administrator" means the Administrator of the Environmental Protection Agency.

(2) Acutely Hazardous Wastes - The term "acutely hazardous wastes" includes all hazardous wastes listed in 40 CFR 261.33(e).

(3) Aqueous Hazardous Wastes - The term "aqueous hazardous wastes" means aqueous waste mixtures which are classified as hazardous wastes under regulations promulgated pursuant to the Solid Waste Disposal Act, as amended, based solely upon the characteristic of ignitability, corrosivity, or reactivity (as defined by regulations promulgated pursuant to Section 3001 of the Solid Waste Disposal Act, as amended) and which are disposed of under one of the following statutory authorities:

(A) Part C of the Safe Drinking Water Act relating to Federal underground injection control programs, or [illegible] underground injection control programs submitted for federal approval,

(B) Section 3005 of the Solid Waste Disposal Act, as amended. The term does not include aqueous waste mixtures which are classified as hazardous based upon toxicity (as defined

by regulations promulgated pursuant to Section 3001 of the Solid Waste Disposal Act as amended), nor such mixtures which are generated as a result of combining water with listed hazardous wastes from specific and non-specific sources or with discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

(4) Certified Hazardous Waste Management Facility - The term "certified hazardous waste management facility" means a hazardous waste management facility or designated specific operation of a qualified hazardous waste disposal facility which has been certified under regulations promulgated by the Administrator as employing state-of-the-art hazardous waste management technology which relies upon land-based waste disposal only to a necessary and incidental degree.

(5) Disposal - The term "dispose" or "disposal" shall have the same meaning as under Section 1004(3) of the Solid Waste Disposal Act as amended. "Dispose" or "disposal" shall not include the use, reuse, reclamation, treatment or recycling of hazardous wastes or the storage of hazardous wastes (except for "long-term" storage in a "qualified hazardous waste storage facility", as defined below). "Dispose" or "disposal" does not include

"disposal" of any amount of hazardous waste by incineration in accordance with standards applicable to incineration facilities permitted under Subtitle C of the Solid Waste Disposal Act, as amended. The term includes long-term storage as defined herein.

(6) Disposal offsite - The term "disposal offsite" means to dispose of hazardous waste at a location or facility which is not onsite..

(7) Disposal onsite - The term "disposal onsite" means to dispose of hazardous waste at the same facility at which such waste is generated or at another facility under direct control and ownership of the generator of such wastes.

(8) Hazardous Waste - The term "hazardous waste" means any waste:

(A) identified or listed under Section 3001 of the Solid Waste Disposal Act, as amended, other than waste the regulation of which has been suspended by Act of Congress, or

(B) subject to the reporting or recordkeeping requirements of Sections 3002 and 3004 of such Act.

The term includes "acutely hazardous wastes", "aqueous hazardous wastes" and "regular hazardous wastes" as defined in

this Subchapter for purposes of this Subchapter.

(9) Long-Term Storage - The term "long-term storage" means the placement of hazardous waste in a qualified hazardous waste storage facility for one year or more.

(10) Qualified Hazardous Waste Disposal Facility - The term "qualified hazardous waste disposal facility" means any disposal facility which has received a permit under Section 103 of the Marine Protection, Research and Sanctuaries Act; under Part C of the Safe Drinking Water Act relating to Federal underground injection control programs, or state underground injection control programs submitted for federal approval; or any disposal facility which has received a permit or is accorded interim status under Section 3005 of the Solid Waste Disposal Act, as amended.

(11) Qualified Hazardous Waste Storage Facility - The term "qualified hazardous waste storage facility" means any storage facility, waste pile or surface impoundment, which has received a permit or is accorded interim status under Section 3005 of the Solid Waste Disposal Act, as amended.

(12) Receipt - The term "receipt" means the act of the owner or

operator of an offsite qualified hazardous waste disposal or storage facility by which he signs or otherwise executes the manifest or shipping paper accompanying the hazardous waste.

(13) Recycle - The term "recycle" shall have the same meaning as defined by the Administrator pursuant to the Solid Waste Disposal Act, as amended.

(14) Regular Hazardous Wastes - The term "regular hazardous waste" includes all hazardous wastes listed in 40 CFR 261.31, 261.32 and 40 CFR 261.33(f). The term also includes all hazardous wastes meeting the characteristics specified in 40 CFR 261.21, 261.22, 261.23 and 261.24. The term does not include "aqueous hazardous wastes" or "acutely hazardous wastes" as defined herein.

(15) Secretary - The term "Secretary" means the Secretary of the Department of the Treasury.

(16) Submission For Disposal Offsite - The term "submission for disposal offsite" means action or actions taken to relinquish custody of a quantity of hazardous waste by the generator of such hazardous waste and to designate such hazardous waste for delivery to an offsite long-term storage or disposal facility such

that the hazardous waste manifest and related reporting and recordkeeping requirements promulgated pursuant to Subtitle C of the Solid Waste Disposal Act, as amended, apply to such action or actions.

(17) Surface Impoundment and Waste Pile - The terms "surface impoundment" and "waste pile" are as defined by regulations promulgated by the Administrator pursuant to Subtitle C of the Solid Waste Disposal Act, as amended.

(18) Ton - The term "ton" means 2,000 pounds.

(19) Treatment - The term "treatment", shall have the same meaning as under Section 1004(34) of the Solid Waste Disposal Act, as amended.

SECTION 4693 ADMINISTRATION AND ENFORCEMENT

"(a) REGULATIONS -

"(1) (A) The Administrator, in consultation with the Secretary, shall promulgate such regulations as are necessary to ensure the compilation, recordkeeping, reporting and submission of information concerning hazardous waste which is subject to the

tax imposed under Section 4691 of this Subchapter. In particular, the Administrator shall promulgate regulations for the recordkeeping and reporting of information on onsite disposal, long-term storage and submission for disposal offsite of hazardous waste within 120 days of the effective date of this Act. Such regulations shall address appropriate modifications to existing hazardous waste manifest requirements, accounting procedures for determining amounts of hazardous wastes placed in a qualified hazardous waste storage facility which are deemed to be in long-term storage, wastes disposed of in a facility certified under Section 4691(c)(5), and requirements for recording and the regular submission of information concerning onsite disposal of hazardous wastes. To the maximum extent practicable, any regulations promulgated pursuant to this Section shall be consistent with regulations existing or adopted under the authority of the Solid Waste Disposal Act for the management of hazardous waste activities generally.

(B) Any person who knowingly fails or refuses to submit any document or information required to be submitted under regulations promulgated pursuant to subparagraph (a)(1)(A); who otherwise knowingly fails or refuses to comply with any requirement in effect under this Section, shall, upon conviction, be subject to a fine of not more than $50,000, or to

imprisonment for not more than two years, or both. Nothing in this subsection shall be deemed to limit or exclude any other penalty under any other law, regulation or authority.

(2) The Secretary, in consultation with the Administrator, shall promulgate regulations as may be necessary regarding the collection of taxes imposed under Section 4691, including regulations regarding recordkeeping and submission of information, statements and returns necessary to determine the identity of taxpayers, identity of certified facilities under Section 4691(c)(5), the amount required to be paid, and the payment of taxes imposed under Section 4691.To the maximum extent practicable, such regulations shall ensure that records, statements and returns required to be kept, rendered and made under this subsection shall be consistent with recordkeeping and reporting requirements imposed by the Administrator under the authority of the Solid Waste Disposal Act.

(3) In discharging their respective duties under this Section, the Secretary and the Administrator may require any person who generates, transports, disposes of, treats, or stores hazardous wastes and who is required to maintain records under the authority of the Solid Waste Disposal Act, the Marine

Protection, Research and Sanctuaries Act, the Safe Drinking Water Act or the Clean Water Act, to submit copies of such reports or make such reports available as required.

"(b) INSPECTION OF RECORDS: ACCESS

The Administrator may utilize the authorities of Section 3007 of the Solid Waste Disposal Act, as amended, and Section 104(j) of the Comprehensive Response, Compensation and Liability Act of 1980, as amended, for purposes of carrying out the requirements of this Section.

(c) COLLECTION AND PAYMENT

(1) The amounts described in Section 4691(b) shall be collected from the person submitting hazardous waste for offsite disposal or long-term storage by the owner or operator of the offsite facility. Notwithstanding the foregoing, the amount of tax charged to the person submitting the wastes shall be reduced to the extent that if no tax is required to be imposed pursuant to Section 4691(c)(3). Regulations promulgated by the Secretary shall govern the procedures for effecting the determination of the amount of the tax to be charged in circumstances involving a certified hazardous waste management facility.

(2) Except as provided in Subsection 4693(e)(2), the tax imposed under Section 4691 with respect to disposal onsite or submission for disposal offsite of hazardous waste, shall be paid within 30 days of the end of each calendar quarter during which such hazardous wastes were disposed onsite or submitted for disposal offiste.

(3) In the case of a tax imposed with respect to the long-term storage of hazardous wastes, the tax shall be paid within 30 days of the end of each calendar quarter during any portion of which such storage occurs, commencing with the first calendar quarter ending one year after the date on which such wastes were initially placed in such storage. Regulations promulgated by the Secretary and the Administrator pursuant to Section 4693(a) shall govern procedures for determining time of tax payment for wastes continuously placed into or removed from a long-term storage facility.

Atlantic Richfield Company

May 21, 1984

1500 Market Street
Post Office Box 7257
Philadelphia, Pennsylvania 19101
Telephone 215 557-2100

H. A. Sorgenti
President

June 28, 1984

The Honorable George John Mitchell
366 Russell Building
1st & C Streets S. E.
Washington, DC 20515

Dear Senator Mitchell:

I want to thank you and the rest of the Environment and Public Works Committee for the opportunity to testify on reauthorization of the Comprehensive Environment Response Compensation and Liability Act on May 23, 1984. I do hope I was able to adequately convey my main point; with the need for reauthorization of CERCLA at a higher level of funding also goes the need for a wider base of funding.

During the course of testimony, you asked three questions which I promised a reply to with documentation.

Q: The original authorization of CERCLA was crafted around the concept that the tax would not exceed 2% of sale price. Supporters of H.R. 5640 claim that rates are capped at 3% of sales price with adjustments for inflation. Document your assertion that both these rates are exceeded by the proposed levels of taxation of H.R. 5640.

A: Consider, as an example, ethylene, contributing some 40-50% of the total petrochemical industry contribution to Superfund. Chemical Marketing Reporter, a trade journal, lists the contract delivered list price of ethylene at 22-23¢/lb. It is our experience that the actual industry price is lower, in the 19.25¢/lb. area. At the proposed level of taxation, $17.71/ton, the percentages are as follows:

	CMR Listing 6/4/84	Actual Industry Experience
Tax as % of sale price	4	4.6

Now, to add further perspective, the 6/4 edition of Chemical and Engineerings News published an analysis of chemical industry profitability showing that average after-tax income as a percentage of sales was 4.3%. This average was pulled up by many small companies that do not contribute to CERCLA. Two chemical companies listed in this analysis that are major contributors to CERCLA reported less than 3% after-tax income as a percentage of sales. These data support our testimony that, even on a before-tax basis, the proposed rates of taxation exceed profit margins.

Q: Provide detailed documentation of the ability of ARCO Chemical Company to pass through less than 40% of the Superfund tax to its customers.

A: In reviewing our records, the 40% number I quoted referred to 1981. Our ability to pass through the tax improved somewhat in 1982 and 1983, but not to the extent that the point I made is invalidated: namely, that a buyers market has forced suppliers to absorb large portions of the tax.

	1981	1982	1983
ARCO Chemical tax paid $MM	8.4	8.0	10.2
Collected from customers, %	39	46	53

These data are supported by invoices, income tax returns and the like. If you need further documentation, please let me know.

Q: Considering intercompetitiveness of products, are there substitute products that unfairly benefit from the present system? How should we deal with this situation?

A: The key point to remember is that a feedstock tax is non-selective, taxing benign as well as hazardous products. Were only hazardous products taxed, one could argue philosophically that society at large was the beneficiary of such a tax, (assuming one ignores short-term economic dislocations), for the price of the benign product would be lower, relative to the competing product.

In reality, we have a situation where the supply-demand equilibrium between competing products is artificially distorted to the detriment of the taxed material. Consider plastic bags and paper bags. The lumber and wood products industry, mentioned by EPA as a hazardous waste disposer at 24 of the National Priority List sites, is not a major contributor to CERCLA. So inequities are present under current law, and even more so under proposed feedstock based taxing schemes. In this case, one of many that can be cited, the plastic bag, though benign, is disadvantaged relative

to competing products. This disadvantage, multiplied many times through the petrochemical industry, will manifest itself as a general weakening of the industry, leaving it less able to compete in domestic and international markets.

Our proposal is one of several schemes that recognizes our obligations, yet straightfowardly addresses problems that I have described in this letter, and that current proposals either underestimate or ignore.

I hope that these answers are responsive to your questions, and we at Atlantic Richfield Company stand willing to provide you and your staff with as much support as you request to solve this most serious of problems.

Sincerely,

H. A. Sorgenti
President

HAS/rah

cc: The Honorable Jennings Randolph
The Honorable Robert T. Stafford

TESTIMONY OF ROBERT J. MUTH

EXECUTIVE VICE PRESIDENT

ASARCO, INCORPORATED

BEFORE THE SENATE ENVIRONMENT

AND PUBLIC WORKS COMMITTEE

REGARDING AMENDMENTS TO EXTEND

AND REVISE CERCLA

MAY 23, 1984

Mr. Chairman, and members of the Committee, I appreciate the opportunity to appear before you today to discuss upcoming legislation to reauthorize the so-called Superfund law. The views that I will express are those only of ASARCO and should not be taken as representing any other company or trade association. Before presenting these views, I would like briefly to explain what ASARCO does and how the new legislation is likely to bear on the company.

A Word About ASARCO

ASARCO Incorporated--my employer--is a company engaged in the United States, and through associated companies, in several other parts of the world, in the mining and processing of nonferrous metals and minerals. ASARCO produces principally copper, lead, zinc, and silver and their associated byproducts. The company also produces a number of non-metallic minerals.

We are proud to note that ASARCO was one of the few companies in industrial America to support enactment of CERCLA in 1980. When some sought to kill the bill late in the 96th Congress, ASARCO was one of the handful of companies which actively opposed filibuster and urged the bill's enactment.

We supported CERCLA's passage then, because we believed that the presence of toxic wastes in abandoned dumps was a serious national problem requiring a national legislative solution, and because the CERCLA legislation offered an approach which we felt was consistent with our concerns regarding international competition. Five years later, it is apparent that there is still much clean up to be done. Thus, ASARCO supports re-authorization of

CERCLA and recognizes the need for an expanded Fund to accomplish the necesary clean up of toxic wastes. Our concern remains that this goal be accomplished with the least possible economic dislocation or burden on any sector of the economy.

International Competition and Environmental Protection

One reason why ASARCO could support enactment of CERCLA in 1980 is that the so-called "front-end" tax applied to importers as well as domestic producers of listed taxable chemicals. Thus, CERCLA's funding mechanism seemed to recognize and respond to several major "realities" of modern industrial life that other environmental laws have ignored. These "realities," which are of particular concern to the nonferrous metals industry, include the following:

* We operate in a world market, with strong international competition, and prices determined not by us, but by trading on the London Metals Exchange and other commodity exchanges throughout the world;

* Because we have no substantial control over the prices of our products, we cannot pass additional costs through to our customers. We are in this respect very much like the wheat farmer, and very unlike a regulated utility;

* If additional costs are imposed on the domestic producers of metals, but not on our foreign competitors, we face two unenviable prospects: either we "absorb" these added costs ourselves or we avoid the costs

by reducing or terminating production and withdraw from contested markets;

* Our industry is highly cyclical. Even now, after two years of "recovery," the metals industry remains severely depressed. We are in no position today to absorb increased costs. But even if these were good times, we would know that less good times, and possibly very poor times lie ahead. And it is during the poor times that the high cost producer inevitably falls by the wayside.

* Inevitably, increased costs falling only on the domestic producer means increasing foreign penetration of domestic markets, loss of domestic production and of export business, loss of U.S. jobs, and more and more mineral reserves becoming uneconomic to mine.

The conclusions to be drawn from these realities are simple: we must find ways to assure that the costs of environmental protection do not contribute to the crippling of this Nation's ability to produce competitively. If these costs can be structured in ways which will not undermine the international competitive position of domestic producers, then domestic industry will be more likley to support legitimate environmental clean-up legislation. If not, domestic industry will have no choice but to opt for survival. It is in this general context that we would like to discuss proposals to revise and extend Superfund.

The Waste End Tax: Going in the Wrong Directon

One of the major issues to be considered in this legislative deliberation is whether to impose a so-called "waste-end" tax. Originally touted as a way to raise additional revenue, the waste-end tax proposal is now advocated by some as a way to create "economic incentives" for the reduction and/or treatment of hazardous wastes. Theoretically, at first glance, the concept appears quite attractive. However, again the realities intrude, and we believe these realities demonstrate why a "waste-end" tax is the wrong way to go.

First, and foremost, a waste-end tax necessarily undercuts the competitive position of domestic industry. Since it would apply only to waste generated and disposed of in the U.S., only domestic producers would be subject to the tax. Foreign competitors would not have to pay. The result, inevitably, would be a reduction in domestic metals producers' already precarious ability to compete in the world market.

If a waste-end tax were absolutely essential in order to raise the necessary funds for Superfund clean-ups or to control future hazardous waste generation, one could understand why the U.S. Congress would consider disadvantaging the Nation's own industrial base. But such a tax is not at all necessary. Needed funds for Superfund purposes can be generated in any number of ways, one being a substantial broadening of the front-end tax list of taxable chemicals and by a modest across-the-board increase in the rate of taxation. In this way the necessary revenues can be raised without creating an excessive economic burden on any single sector of the economy.

Additional revenues can be raised by assuring that exporters to the U.S. do not evade the tax by selling downstream fabricated products, alloys and compounds of taxed metals. The metal content of these products, alloys, and compounds can be taxed as well without major problems of administrability, equity, or impermissible international trade barriers. We would be pleased to work with the Committee on concrete proposals to accomplish the goal of adequate funding for Superfund.

As the recent GAO report demonstrates, waste-end taxes have not proven to be a reliable source of funding when imposed at the state level.

> GAO found that the three states [studied] (1) have not collected the revenues they anticipated, (2) have not determined if the tax achieved its objective of encouraging more desirable waste management practices, and were concerned that a similar federal tax may reduce state tax revenues or increase the incentive to illegally dispose of hazardous waste.*

There is no persuasive evidence that a federal waste-end tax will be free of these same problems.

There are other serious difficulties with implementing a waste-end tax scheme. Among these additional problems are the following:

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* GAO, "State Experiences With Taxes on Generators or Disposers of Hazardous Waste," Report to the Chairman, Subcommittee on Commerce, Transportation, and Tourism, Committee on Energy and Commerce, House of Representatives, May 4, 1984, pp. ii.

1. A waste-end tax could prove to be quite inequitable if the same level of tax applied to highly toxic wastes as to to waste streams involving relatively high volumes of low toxicity wastes. This would particularly be a problem with respect to high volume wastes deemed "hazardous" in their entirety, even though constituents deemed to be "hazardous" constitute only a small fraction of a particular waste stream.

2. Establishing statutory tax rates on wastes (or categories of wastes) without regard to the value of the products with which such waste streams are associated will inevitably cause serious economic dislocation. Any tax scheme must take into account the ability of the product to bear the tax, the product's value, and its competitive position vis-a-vis substitute products and materials, if severe economic dislocation is to be avoided.

3. There has been no adequate economic analysis of the impact of proposed waste-end taxes on industries other than the chemical industry. The impact of any such tax on sales, jobs and consumer prices has yet to be analyzed for industries like the nonferrous metals industry. If any program involving costs of this magnitude were to be proposed by a regulatory agency, Congress would insist that a prior economic impact analysis be prepared. Congress should require as much analysis before it enacts such a program.

4. There has been no satisfactory proof that the tax will actually work in practice to reduce the generation of wastes or enhance waste treatment, as the hypothesized "incentive" is supposed to work. For industries like

the mining industry there may be *no practical alternative to* land disposal of such high volume, low-toxicity wastes as overburden and waste rock. For the theoretical "incentive" to work in practice, practical waste management alternatives must exist and the level of taxation must be geared to encourage their use. The only actual "incentive" of a waste-end tax on mine wastes may be to shut down production from those mines. We applaud the recognition of this fact in Rep. Florio's latest bill, H.R. 5640, which exempts special wastes, such as mine wastes, from the waste-end tax.

5. As the GAO report has pointed out, there appear to be "conflicting objectives inherent in many waste-end tax systems. The more successful the tax is in achieving its objective of encouraging more desirable waste management practices through variable tax rates or exemptions, the less successful the tax will be in raising needed revenue." Id at p. v.

6. Leaving administrative discretion as to which wastes to tax and the levels of taxation is not the answer; it may create more problems than solutions. See, for example, our subsequent comments on the IRS proposal to tax transitory compounds appearing in the metals extraction and refining process.

7. RCRA already creates a comprehensive system of regulations and incentives to reduce the generation of hazardous wastes in the future, for those industries and waste streams which can be regulated. A CERCLA waste-end tax would tend to be redundant, if imposed for this purpose. Proponents of the waste-end tax have failed to demonstrate how the waste-end tax

would create incentives which cannot be created as well or better by properly-structured RCRA regulations.

8. If waste-end taxes were added to, instead of substituted for, so-called front-end taxes, the potential for economic dislocation would be still greater. The need for prior economic impact analysis would be still greater for such a dual tax scheme. This would be particularly critical if a federal waste-end and front-end tax were imposed on top of existing state waste-end tax measures.

9. The bureaucratic costs, complexity, inefficiency, administrative and enforcement problems entailed in implementing a waste-end tax could be quite great by comparison to the front-end tax approach. As the GAO report notes, "Neither EPA nor IRS has estimated the cost to implement [and enforce] a waste-end tax. The IRS senior program analyst for CERCLA activities could not attach a dollar figure to the potential costs of implementation. . ." Id at p. 34. The number of waste generators and/or disposal sites at which the tax would be imposed would have to be far greater than the relatively small number of major producers of taxable chemicals who now serve as tax collectors for the Fund. For example, the 1980 Senate Committee report on CERCLA noted that the front-end tax would be easier to administer than a waste-end tax because it would be levied on fewer than 1000 companies, instead of the 260,000 waste generators who might be covered under a waste-end tax. The number of taxable substances would also increase markedly. The GAO report estimates that some 696 so-called "hazardous substances" could be subject to the waste-end tax by comparison to the less than 50 substances which are presently taxed under

the present front-end tax system. Id. at p. 1. Finally, as the GAO report pointed out, current data systems are not adequate to carry out a waste-end tax system. Thus, significant new reporting and recordkeeping costs and burdens would be entailed both for the government and private industry.

10. Waste-end tax approaches would inevitably create some incentive for "midnight dumping" and other unauthorized waste disposal practices. This would not only inadvertantly bring about more lawlessness, but also pose a greater threat to health and environment.

Finally, it is worth noting that the current tax system under CERCLA has by and large been a reasonably reliable, efficient, and generally equitable system for raising the necessary revenues. Proponents of the waste-end tax have yet to demonstrate persuasively that the current tax system poorly serves the purposes of the Act; nor have they responded effectively to the above-stated real world concerns about the waste-end tax concept, except to say that it looks good on paper.

The IRS Proposal: Taxing the Process, not the Product

Another tax measure of concern to the nonferrous metals industry has been the IRS' proposal under CERCLA to tax transitory compounds of copper, lead, and zinc when they appear in the process of extracting and refining these metals from ores and concentrates. Clearly, we do not believe Congress intended in 1980 to tax these compounds in the metals extraction process. To

tax the process, rather than the product inevitably awards a competitive advantage to our foreign competitors.

We are pleased to note the recent action of the Senate Finance Committee, led by Senator Baucus, to amend CERCLA to clarify that no such tax on the process was intended in 1980. We urge this Committee in considering its 1984 CERCLA amendments to make clear to the IRS that no authority is being conferred to tax in-process compounds in the metals extraction and refining process. Our continued ability to compete in a fair fight with our foreign competitors requires this step. (See Appendix A for a more complete statement of ASARCO's concerns in this regard.)

Other CERCLA Issues and the International Competition Perspective

There are a number of other issues besides tax questions to be resolved in CERCLA reauthorization legislation. Most of these, too, will have some impact on the international competitive position of companies like ASARCO. The significance of many of these issues may not be as obvious as the tax issues, but the international competition perspective needs to be borne in mind throughout the Committee's deliberations on CERCLA.

For example, one key question relates to standard of liability for clean up of abandoned mine sites. The resolution of this issue may have a substantial impact on companies like ASARCO, which have been in the mining business for nearly a hundred years. If reasonable standards of liabilty are adopted, the impact on our ability to compete may not be excessive. If, however, ASARCO is potentially held liable for 100% of the clean-up costs of

every site at which our company ever conducted mining operations (no matter how small) merely because we once mined in an area and because all others who mined there are now deceased, defunct, or unable to be located, the company's ability to remain a viable competitor in the world metals economy may be in jeopardy.

A Closing Note

We know that there are no easy answers for many of the difficult questions which confront Congress in the CERCLA reauthorization debate. But we also know that with a constructive attitude, a willingness to build policy which incorporates and balances a range of values, and a certain amount of creativity much can be accomplished. In this spirit, we offer our assistance and pledge to work with the Committee. Our hope is that this year, just as in 1980, ASARCO can be an active supporter of legislation to reauthorize and extend CERCLA. Our hope is also that 1984 will be the year when Congress expressly acknowledges the critical importance of our concerns about the international competitive impacts of environmental regulation and begins to strive with us to eliminate or minimize those impacts.

Statement on Behalf of the American Petroleum Institute presented by John J. Fitzpatrick accompanied by Stephen Williams before the Senate Environment and Public Works Committee, Washington, D.C., May 23, 1984 on Superfund reauthorization.

Thank you, Mr. Chairman. My name is John J. Fitzpatrick, Washington Counsel for Gulf Corporation. With me is Stephen Williams, Counsel to the American Petroleum Institute. It is on behalf of the American Petroleum Institute (API), that we are testifying today. API represents 235 petroleum companies and approximately 6,000 individual members who are engaged in all aspects of petroleum exploration, production, transportation, refining and marketing. We appreciate this opportunity to present our views on the subject of compensation for hazardous substance-related disease and specific aspects of the broader Superfund legislation.

Let me begin by saying that the Institute believes that those who have an injury caused by exposure to hazardous substances should be compensated, and those responsible for that exposure should compensate the injured party. And we do not oppose the congressional and public objective of continuing the Federal program to clean up hazardous waste sites and hazardous releases into the environment. As representatives of a significant portion of the taxpayers who fund this program, we have a great interest in the effective management of these resources.

We are not opposed to reauthorization. However, one of the problems with Superfund when it was first passed was the dearth of legislative history, resulting from its somewhat hasty

passage. This caused later problems, such as the lack of direction for courts. We see no compelling argument for passage of reauthorization this year. We note that proposed taxes in the reauthorization do not become operative anyway until Fiscal Year 1986.

We also believe that the complex and serious issue of environmentally-caused personal injury deserves focused attention -- handled independently and separate from reauthorization of the Superfund program.

Our testimony today consists of introductory remarks followed by two parts. Part One deals with the issue of personal injury related to exposure to hazardous substances; Part Two is concerned more specifically with the reauthorization of CERCLA.

PART ONE

We are impressed by the significant and comprehensive compromise struck by the Congress in 1980 when it originally enacted CERCLA. In order to begin to answer the many questions the personal injury issue poses, Congress asked itself three questions: What is the law? What are the facts? And how is the program working? It seems to us that any informed response to this issue needs this information.

The legal study, pursuant to §301(e)* of CERCLA, found certain procedural obstacles, but only assumed the facts of a widespread problem, found no lack of a forum, and unanimously

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* "Superfund Section 301(e) Study Group," Senate Committee on Environment and Public Works. 97th Cong; 2nd Sess; Injuries and Damages from Hazardous Wastes -- Analyses and Improvement of Legal Remedies (Comm. Print No. 97-12, 1982) (Hereinafter called "the 301(e) study.")

recommended against a federal cause of action. The factual evaluations of health effects under §104(i) is currently underway after API intervened in a lawsuit* to compel the government to gather this vital information.

We believe, however, that reauthorization of the Hazardous Substances Reponse Trust Fund should await the results of the Section 301(a) studies that were mandated by Congress and are currently underway at EPA. Section 301(a), or the "how goes it" study, allows the President until December 1984 to gather such esential information as the effectiveness of the Act in responding to and mitigating the effects of hazardous substance releases, future funding needs projections, the experience in recovering Fund disbursement from liable parties, state participation, etc.

We also note that the tax authority under CERCLA extends to September 30, 1985. We are confident that Congress, with the 301(a) information in hand, could do a more thorough job next year with more complete information in its possession.

This information, together with the information API and others are gathering and making available, should assist greatly in answering the complex questions this issue raises.

We believe, however, that there are difficult questions raised by the problem of personal injury caused by exposure to hazardous substances, and by ths legislative proposals currently

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* Environmental Defense Fund, Inc. v. Margaret M. Heckler, et al., Civil Action No. 820351-.

suggested as solutions. These questions deal with determining the extent of such injuries or illness in the population, the need for a federal remedy at this point, the actual scope of the coverage of the legislation, medical verification of the cause of illness, and making sure that costs are reasonable.

Today, I am going to concentrate my remarks regarding compensation on three basic areas. First, is there a need for legislation on this subject, both from the standpoint of the scope of the health problem and the appropriateness of a federal remedy. Second, what is the state of scientific knowledge in the area of causation, as it applies to determining the cause of chronic illness? And third, what are the proposed solutions likely to cost?

In answering these questions, we would like to share with the committee some of the information we have gathered that may shed some light on the answers to these questions. We have completed several studies, and several others are currently underway, that should be useful to you in evaluating both the scope of disease caused by hazardous substance exposure and the problems that accompany some of the compensation fund proposals.

The Need for Legislation

Proposals that would drastically change the way we compensate those with chronic illnesses in this country assume a widespread problem with illness caused by hazardous substances exposure. Yet we are concerned that there has been little or no documentation to substantiate that a large-scale public problem exists. Information gathered for API reveals that, since 1970

increasing life expectancy has been achieved because of a reduction in chronic mortality rates (not because of reduction in infant mortality rates), that these reductions are even more dramatic among adults (since 1970 until now and continuing, the life expectancy of a 40-year-old white male increased two years and continues to increase at a rate of two years per decade) and that when cancer rates separate out those due to smoking, the remaining rates remain stable or slightly declining.* Indeed, although the 301(e) study did recommend such a fund, it recognized the insufficiency of information as to both the size and scope of the problem, if any.

We would make four additional points on the question of whether federal legislation or hazardous substance-related disease is needed: the desirability of collecting further information from the studies authorized in Section 104(i) of CERCLA; the conclusion to be drawn from the research that the American Petroleum Institute has sponsored; the availability of other compensation mechanisms currently operating; and the lack of justification for a new federal cause of action.

Status of the Implementation of 104(i)

Because API is convinced that more comprehensive knowledge is needed about the dimensions of hazardous substance-related disease, we intervened in a suit to require the Department of Health and Human Services and the Environmental Protection Agency

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* Difficulties in the Attribution of Causation of Diseases of Human Beings at pp. 1-2, by Philip Cole, M.D., M.P.H., Dr.P.H. Senior Epidemologist, Epidemiology Resource Incorporated, May 15, 1984 (attached hereto).

to undertake several information gathering projects as required by Section 104(i) of CERCLA. This suit was settled last year with the government agreeing to establish the Agency for Toxic Substances and Disease Registry (ATSDR) "for all persons exposed to toxic substances as a result of environmental exposure," and to gather and evaluate other information on the incidence of exposure-related disease.

In accordance with the settlement, the Agency for Toxic Substances and Disease Registry (ATSDR) was established in April 1983, and each area of Section 104(i) is in some stage of implementation:

o EPA, based on the work of a subcommittee established last year, is expected to make a recommendation shortly on the usefulness of national registries, such as a national registry of disease and illnesses of persons exposed to toxic substances;

o ATSDR, through the National Library of Medicine, is upgrading the Toxicology Data Bank by including new substances, and is modifying the Bank so that it can have more practical applications;

o ATSDR is also contracting with the National Governors' Association to devise a list, by November 1984, of areas that have been closed because of contamination;

o A list of emergency responses is now available through the Center for Disease Control in Atlanta;

o Cancer cluster evaluations are now underway;

o ATSDR has consulted with state and local governments on several hundred emergency responses in 1984; and

o In reference to survey and screening programs, there have been preliminary findings reported at several sites, a strategy developed to assess adverse effects of PCB exposure, and health study and protocols developed for five other dump sites.

We believe this progress toward meeting the requirements of Section 104(i) should hasten the feasibility of making the kind of determinations necessary on the need for a compensation fund or some other legislative approach to hazardous substance-related disease. Although Dr. Vernon Houk, the Assistant Administrator of ATSDR for Registries, says "... the conclusion must be drawn that the scientific data base presently available does not permit with certainty a determination of whether exposure has a causal relation to illness occurring in an individual or not,"* we remain convinced that sweeping policy decisions based on the limited knowledge we have today on both causation and on the incidence of hazardous substance-related disease is not in the best interest of this country.

Petroleum Industry Research

Our industry has a vital interest in whether exposure to petroleum products may be contributing to any health problems. In trying to assess these problems in the petroleum industry, our industry is making a good faith effort through considerable research to identify any health effects associated with our products. We believe we have gained valuable knowledge that is

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* Address to the American Insurance Association Conference on Environmental Injury Compensation.

making a contribution to the overall pool of information necessary to make sound policy in this area. As discussed above, we have encouraged the ATSDR to do the same and believe that it is bringing in additional information that is useful.

We note, however, that many in the Congress who are drafting legislation concerning chronic illness related to hazardous substance exposure assume widespread health problems. Such assumptions are not supported by our own research. Additionally, we would make the point that it makes little sense to tax our industry disproportionately to whatever part of the problem originates with us. For example, EPA has estimated that petroleum refineries generate only 3 percent of the hazardous waste in the nation, while according to IRS reports, crude oil accounts for 15 percent of taxes raised under CERCLA. The inequitability would be compounded if a personal injury compensation fund were included under CERCLA.

To date, the research sponsored by the American Petroleum Institute and the petroleum companies has not indicated widespread health problem related to petroleum. Four epidemological studies* of refinery workers have been conducted by

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* "Epidemologic Study of Refinery and Chemical Plant Workers," Journal of Occupational Medicine 24:203-212, 1982 by N.M. Hanis, et al.; "Long-Term Mortality Study of Oil Refinery Workers, Mortality of Hourly and Salaried Workers," American Journal of Epidemiology, October 1983 by C.P. Wen, et al.; "Retrospective Mortality and Medical Surveillance Studies of Refinery Workers in Benzene Areas," Journal of Occupational Medicine, September 1983 by P.P. Wen, et al.; "Long-Term Mortality of Oil Refinery Workers, Number 2 - Comparison of the Experience of the Active, Terminated and Retired Workers," Journal of Occupational Medicine, February 1984 by C.P. Wen, et al.

petroleum companies were recently published in scientific journals that require peer review prior to publication. These studies show that mortality from all cases for active refinery workers, including all cancers as a category, was lower than expected when compared to that of the U.S. population of similar age, sex and race. Analysis of mortality by specific site of cancer, employment status and pay status revealed slightly elevated standardized mortality ratios for certain types of cancers, but these elevated rates were, with one exception at one refinery, not statistically significant and were within the realm of what could normally be expected due to chance alone. Company epidemiologists are evaluating trends across companies in these elevated areas and will evaluate in greater detail any trend that appears questionable.

If refinery workers, who are presumably subject to far greater exposures to petroleum substances than are citizens as a whole, are not showing demonstrable ill effects, it is a significant argument that exposure to petroleum in the ordinary course of events is not likely to be causing a widespread public health problem.

In addition to petroleum company-sponsored research, the American Petroleum Institute has had a formal environmental health research program since 1945. Over the years, this program has expanded in scope and complexity, until now it comprises approximately half of the total API research effort, with a health-related research budget since 1978 averaging nearly $8 million a year.

All of API's research is conducted on a contract or grant basis with universities, research institutions, or private contract laboratories. The results of API research are published either in the open scientific literature or as reports available to the public from API. In addition, it is the written policy of API that all health-related research project reports, both interim and final, are sent with 15 days of receipt by API to the appropriate government agency (e.g. EPA, OSHA, NIOSH). Another method of disseminating research findings is through API-sponsored scientific seminars, many of which are open to the international scientific community, government, academia, and industry.

Two epidemiological projects are currently underway within the American Petroleum Institute that will improve the usefulness of pooled mortality data for trends as well as prospective mortality analyses. The first study is entitled "Protocol for Merging Cohort Studies of Populations with Similar Exposures." The first phase of this project determined the feasibility of merging retrospective refinery workers' information from five petroleum companies, and a merger of samples is going forward. This would provide greater statistical power for detecting increases in mortality and wider industry representation than studies conducted within one company. Analysis of general mortality trends across companies will also help substantiate findings from previously conducted mortality studies.

The second project will determine the feasibility of establishing a "Registry of Mortality of Refinery Workers." A prospective mortality registry across a number of companies can be used as a surveillance tool to provide a valuable prospective component to the overall worker surveillance system. This will help identify potential health problems more accurately than retrospective studies.

Results of API's work have been submitted to and discussed with EPA, as well as API's plans for follow-up work. API has and will continue to cooperate fully with the government in the evaluation and mitigation of this potential health problem.

Currently Available Compensation Mechanisms

We believe it is useful in considering any new compensation scheme to evaluate present avenues of recovery for persons with chronic illnesses. The American Petroleum Institute has been examining how individuals are currently compensated for economic losses related to illness. The question is whether there has been a failure, of indviduals and society, to provide for compensation for the costs of chronic illness.

We have found, initially, that federal and state governments support a wide variety of income-providing programs -- to assist disabled or injured workers and their dependents. Most households are eligible for some type of partial income replacement in the event the income-earner or other head of household is disabled because of chronic illness. In the case of death from a chronic illness, a large majority of the survivors

and the public income-replacement programs such as Social Security provide for survivor benefits.

Preliminary results also indicate that through existing mechanisms suggest that more than 90 percent of the U.S. population has health insurance coverage to provide reimbursement of some medical expenses. About 80 percent of the population is covered by private insurance and more than 10 percent is covered by Medicare/Medicaid.

Medical Expense Compensation. The primary mechanism for covering chronic disease medical expenses is private insurance. In 1981, it is estimated that 188 million Americans (about 80 percent) had private insurance covering hospital expenses -- generally providing for 80 percent reimbursement. Major medical policies, which provide extended coverage, were held by 158 million Americans. The number of people with major medical coverage and the extent of that coverage has been steadily expanding. Medical insurance benefits of more than $76 billion were paid by private insurers in 1982.

Of the 20 percent of the population without private medical insurance, an additional 10 to 12 percent are covered by public programs. Medicare covers the elderly population over age 65 and medicaid covers the low income population. The remaining 8 to 10 percent who are uncovered for medical expenses appear to be largely children and young adults in the 19-24 age group and some unemployed and lower income (but above the poverty level) persons.

Income Compensation. Lost income because of inability to work is replaced through both public and private mechanisms. Social Security Disability Insurance (SSDI) is the major source of income replacement and in 1983 about $17.5 billion was paid out in benefits, mostly for those who suffer from chronic illnesses. Benefits are available to covered disabled workers and their spouses and children; disabled widows, widowers or divorced spouses of covered workers; and children under 22 of covered workers. Through the SSDI mechanism, most U.S. families have a source of partial income replacement if chronic disease afflicts a present (or previous) wage-earner.

For those not eligible for Social Security, income benefits are available through the federal Supplemental Security Income Program (SSI). This program was explicitly designed to provide basic income coverage to those elderly or disabled of modest means who did not qualify for Social Security.

Income losses also are replaced through private disability insurance, often provided through employers but available for purchase by individuals desiring such protection. At present, approximately 80 percent of the civilian work force is covered by disability insurance provided through employers. Generally these programs provide for partial income replacement for periods of at least two years, by which time the individual would have qualified for Social Security or perhaps some other program.

Lost income also may be replaced for some workers through Workers Compensation, if the chronic disease is determined to be occupational in origin. Difficulties in determining causation

and structural problems appear to have limited the extent of compensation received through Workers Compensation.

Finally, some people who become disabled from chronic disease may receive benefits through specialized programs such as Veterans Benefits, Federal Employees Compensation, Longshoreman's and Harbor Worker's, Black Lung and others.

Lost income due to premature death also may be replaced through a combination of private and public compensation mechanisms. Private insurance is a major source of compensation in the case of death. Some 72 percent of the adult population has one or more life insurance policies. For those between the ages of 25 and 65, the coverage is almost 80 percent. In 1982, death benefits of $15 billion were paid to nearly 3 million beneficiaries.

Other important sources of compensation for death are the survivors benefits under the Social Security program and other public compensation programs. Survivors benefits typically continue to provide income to spouses and to children up to the age of 22.

Federal Cause of Action

Another proposal often put forward is the creation of a new private cause of action for personal injury, economic loss, or property damage from exposures to hazardous substances. Jurisdiction to hear such claims often would be concurrent in state and federal courts. In addition to the new federal cause of action, claimants' rights under state law for damages in

connection with any hazardous substance generally would be preserved, and not preempted.

API believes that a new federal cause of action is not justified, for several reasons.

First, there has been no demonstrated lack of either a forum or a cause of action for claims in state court. For example, 350 residents of Jackson Township, New Jersey,* recently were awarded $16 million by a jury against the municipality for various kinds of damage from a contaminated water supply. Although the case is being appealed, it demonstrates that such claims can in fact be litigated without a new federal cause of action. Other examples from around the nation can certainly be identified. Moreover, the 301(e) study has acknowledged that there is no lack of forum or cause of action,** and instead focused on difficulties presented by uncertainties concerning causation, restrictive statutes of limitations and the potential barrier of high transactions costs for relatively small claims.

We support reform at the state level with regard to restrictive statutes of limitations. However, we see no improvement to be gained by a federal cause of action with regard to the other issues raised in the 301(e) study, which unanimously recommended against creating "add-on" federal tort.***

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* Ayers v. Jackson Township, 19ERC24, December 2, 1983.

** The 301(e) study, part I at page 193.

*** The 301(e) study at pages 290-291, 307.

Second, a new federal cause of action would force a litigant to deal with two different sets of rules of law, federal and state, regarding the same set of facts. Such matters as the rule of evidence on relevancy of scientific evidence, including use of government tests and investigations, presumptions affecting the burden of going forward and which damages are compensable could well be different in the two forums. The interrelationship between a new federal cause of action and state causes of action could be complex for the parties and the state and federal courts. To the extent state laws and procedures are not preempted, the federal cause of action would be duplicative of state remedies.

Third, another problem could be the impact of creating concurrent jurisdiction in both state and federal court systems, which could affect volume and distribution of cases for federal and state courts. The federal judiciary is already overburdened and this provision will only add to that burden.

Fourth, nothing in a federal cause of action addresses the high transaction costs of litigtion, including attorney's fees and experts' fees. It is estimated that in asbestos litigation only 37 percent of the recovered amounts actually went to the plaintiffs. The remainder went to attorneys' fees and other costs of litigation. A new federal cause of action could very well add to these costs.

Recapitulation

Let me recapitulate briefly our approach to examining the need for legislation to compensate people for chronic illness that might be related to exposure to toxic substances. First, we

substances. First, we believe the additional information which should be forthcoming in response to the Section 104(i) study should be evaluated before any far-reaching legislation is given serious consideration. Second, API and petroleum company research do not indicate widespread health problems related to exposure to our products. We are continuing to conduct extensive research into this question, however, and make all of the results available to the appropriate government agency. No major problem is likely to go overlooked, considering our own and other public and private research efforts in this area. Third, our preliminary survey of current mechanisms for compensating those with chronic illnesses does not disclose a major gap that requires a revamp of the entire system. At the least, it indicates the current system provides ways of compensating the chronically ill for medical expenses and lost income for the vast majority of people. And the evidence indicates a new federal cause of action is not justified.

The Problem of Causation

A further complication in considering the need for additional compensation for those with diseases related to exposure to hazardous substances, is the question of causation of disease. Our legal system traditionally required a showing of fault or failure to use due care before awarding compensation. Even under strict liability theory, the burden is on the plaintiff to show by a preponderance of the evidence that the defendant's activity in fact caused the harm complained of by the plaintiff. Some alternatives, including various compensation funds and federal

cause of action proposals, substitute presumptions of fact for determinations of fact. Such presumptions vastly reduce the burden of proof and place the cost of chronic illness, whatever the cause, on those who manufacture and handle allegedly hazardous substances. However, a program that compensates victims of disease but improperly ascribes the cause will do nothing to decrease the incidence of that disease. Some presumptions regarding attribution of the cause of disease have no basis in established scientific evidence.*

Most Cancer Not 'Hazardous Substance'-Related

Recent publications by established and recognized members of the scientific community suggest that the primary causes of cancer are related to factors other than environmental exposures to hazardous substances. Thus, presumptions which encourage attribution of disease causation to chemical exposure are misguided.

In 1981, Richard Doll, an internationally recognized physician and epidemiologist, and his associate, Richard Peto, independently evaluated existing evidence on the causes of cancer. They determined a best estimate of the percentage of all cancers caused by main industrial pollutants of air, water and food, by industrial products and occupation. They found that the best estimate is that the occupational exposure accounts for 4 percent

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* See Judge Breitel's statement in the 301(e) study at pp. 299-300 arguing that presumptions "can lead to the reductio ad absurdum that if causation is not provable at all, there must be a claim-saving presumption."

of all deaths (the range was 2 to 8 percent); for environmental pollution, the best estimate was less than 2 percent (the range was 1 to 2 percent). Each of these summaries carried the warning that although only a nominal percentage of all current deaths is attributable to these factors, there is still a great deal of uncertainty in this area. The scientists stressed the importance of interaction of multiple factors in the development of cancer, and noted that "voluntary lifestyle" risk factors, such as excessive smoking and certain diets, tend to be the cause of most cancer in industrial societies.*

Dietary causation of cancer was recently explored in an article in Science magazine by Dr. Bruce Ames, Chairman of the Department of Biochemistry, University of California, Berkeley. Dr. Ames references the numerous toxicological bases for his comments and states: "There are large numbers of mutagens and carcinogens in every meal, all perfectly natural and traditional. Nature is not benign." He discussed the increasingly persuasive evidence that carcinogens naturally present in certain foods may play a signficant role in cancer causation and points out that "human dietary intake of nature's pesticides is likely to be several grams per day -- probably at least 10,000 times higher than the dietary intake of man-made pesticides." He also discussed anti-carcinogens, which serve as defense mechanisms

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* Richard Doll and Richard Peto, Causes of Cancer (New York: Oxford University Press, 1982), pp. 1251-1258. Similar estimates of the factors were also published by the Office of Technology Assessment, "Assessment of Technologies for Determining Cancer Risks from the Environment," OTA, Congress of the United States, (June 1981), pp. 8-9.

against mutagens and carcinogens and which occur naturally in certain fruits and vegetables. In his discussion of risks, Dr. Ames points out that "the levels of particular carcinogens to which humans are exposed can vary more than a billion fold." He states that "Diet, which provides both carcinogens and anti-carcinogens, is extremely likely to be another major risk factor" (in addition to tobacco). He also cautioned that "We must also be prudent about environmental pollution." He concluded that, "Despite all of these risks, it should be emphasized that the overall trend in life expectancy in the United States is continuing steadily upward."

Since 1981, there have also been a number of scientific and medical reports implicating fatty diet as a major culprit in heart disease and cancer. As a result, the U.S. Health and Human Services Department has recently established a public relations program to persuade Americans to eat fewer fats and oils and more fiber, limit their intake of alcohol and give up tobacco so they can cut cancer deaths by 25 percent by the year 2000.* There are also recent reports linking beer, wine and whisky with rectal and lung cancer, in addition to earlier findings linking alcohol consumption with cancers of the mouth, throat, larynx and esophagus.**

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* The Washington Post, "Government's Anti-Cancer Campaign Evokes More Silence than Screams," March 8, 1984, p. A21.

** Ibid., "Study Links Drinking to Lung, Rectal Cancers," March 8, 1984, p. A18.

Presumptions Too Inclusive

While science can identify areas of potential risk for broad disease categories, except in a very few cases, it is not possible to associate specific exposures to specific disease outcomes. Thus, a qualified scientific decision based on the weight of all the evidence without presumptions is more accurate, more just and more likely to serve the interest of society in allocation of resources towards diminishing the incidence of disease. Claimants and defendants should be free to submit relevant evidence and scientific data for consideration in individual cases without the prejudice of presumptions which may not be scientifically supportable.

The major problem with most presumptions is that language which is compatible with the state of scientific knowledge on exposures to hazardous substances-related disease is also likely to be so broad as to allow far more claims than can reasonably be attributed to the exposure. The Washington Post, in a recent editorial, stated: "But there are larger, ethical questions involved as well. Suppose it could be established beyond a reasonable doubt that living near a chemical dump raised the risk of some form of cancer by, say, 3 percent. That means that for every 103 people in the community who got the disease, 100 would have gotten it anyway. Is it fair for the taxpayer to make large payments to every one of the 103 -- since there is no way of telling which 3 in the group owe their cancer to the dump --

while people in other communities with the same disease receive no compensation at all?"*

And these presumptions have economics consequences. Last year, the Minnesota legislature passed a Superfund law containing presumptions about causation and disease. As a result, the Environmental Risk Analysis Systems, known as ERAS, in London has refused to provide either direct insurance or reinsurance for any company's environmental liability risks in Minnesota. The London group is by far the largest and most important endorser of environmental risk insurance. While other sources of insurance are available, their amount of coverage is minimal by comparison. The result of the ERAS action has been that a number of companies doing business in Minnesota cannot get insurance to cover their risks under their Superfund law. Some of the large companies are becoming self-insured; for smaller firms, however, that is not an option.

The basis for the action by ERAS is that the presumptions in the Minnesota Superfund law "unreasonably shift(s) the burden of proof." The Director of ERAS says that "as the law stands we feel that the burden of proof is unreasonably altered to the stage where we cannot provide insurance for the onerous liability regime it imposes."

The Director summed up his analysis of the Minnesota law as allowing "... a plaintiff simply to show: 'I have cancer, cancer

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* The Washington Post, March 28, 1984, p. A-22.

may be caused by goo, you handled goo, so you are liable.'"* Presumptions which may sound good on paper but in reality do little to prescribe the number of persons who may qualify for compensation can rapidly deplete a company, or the public, treasury.

Costs of a Compensation Fund

Another problem for a compensation fund is that the lack of scientific precision inevitably leads to providing compensation for a larger number of people than was originally intended. This problem can be observed in many compensation funds. In addition, however, once a compensation fund is established, it sets in motion a political dynamic that leads to costs that are much higher than even the most liberal estimates.

In essence, medical or health surveys of those potentially eligible for a particular fund at a particular time have only limited relevance to estimating the eventual number of claimants who will receive compensation from the fund. What happens is that the fund creates a group with a continuing interest in relaxing standards for access to the fund, for increasing compensation from the fund, and for broader definitions of damages that the fund will reimburse. And, as all of us in the political world know, a "special" interest, that is a group of people who stand to gain signficiantly from a proposal, is willing to devote a lot more energy and resources into efforts to

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* Letter from Dr. R. M. Aicken, Director, Environmental Risk Analysis Systems, to Jim Kimble, Senior Counsel, American Petroleum Insurance Association, February 16, 1984.

liberalize provisions of the fund than is the general public, with a more limited financial interest in restricting the fund.

Thus, Congress might initially devise a fund with limits to prevent a high cost to the fund. But the practical truth of the matter is that each and every session of Congress will provide another opportunity to expand the coverage of the fund, or to facilitate access to the fund, or to increase the size of the fund. The Black Lung and Longshoreman's fund, both of which have been the subjects of API research, are good examples of compensation funds that have far exceeded original cost estimates, due in significant part to later liberalization of claim requirements.

The Black Lung Compensation Experience

The Black Lung program was originally intended to provide compensation for underground coal miners afflicted with certain employment-related lung disease.* It was projected by proponents in 1970 to cost $350 million over the life of the program. The program later was amended by the addition of other classes of eligible persons and eligibility presumptions, leading to the gradual erosion of any requirement for meaningful evidence of the existence of black lung disease or that an illness was caused by coal mine employment. As a result, the Black Lung program by 1981 already had cost $11.5 billion, nearly thirty-three times

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* Danny A. Bring, "A Legislative History and Analysis of the Black Lung Program," Discussion Paper #031, American Petroleum Institute, Feburary 1984.

the original projection. Despite the 1981 amendments which tightened eligibility for new applicants, the program is spending $2.5 billion a year.

The escalating costs have, in part, been blamed on the legal presumptions and a nonscientific definition of the Black Lung disease. In a 1980 report to the Congress, the General Accounting Office (GAO) stated that 88.5 percent of the Black Lung program claims approved by the Social Security Administration (SSA) did not contain adequate medical evidence to establish a coal miner's disability or death from black lung. The 1980 report concluded, however, that approval of the black lung claims was consistent with congressional intent, an intent presumably resulting from sympathy for those in need, a sympathy that could readily affect future congressional action on a hazardous substance compensation fund, should one be established. In a 1982 report, the GAO stated that 84 percent of the claims approved by the Department of Labor (DOL) contained no medical evidence of Black Lung disability or death or that medical evidence was inconclusive or conflicting.

Longshoremen's and Harbor Workers' Compensation Program

In 1927, Congress enacted the Longshoreman's and Harbor Workers' Compensation Act to provide compensation for employees injured while engaged in maritime employment. Liability for compensating injured employees rests with longshore employers who must provide coverage by obtaining insurance or self-insuring. Since 1927, the act has been amended 10 times. Major changes to the act came with the 1972 amendments. These amendments

substantially increased benefits for disabled employees and their survivors, extended coverage to shoreside areas, and provided death benefits to survivors of permanently disabled employees who died from causes unrelated to their injury. From 1972 to 1982, expenditures for the longshore program have grown 726 percent from $43 million in 1972 to $355 million in 1982.

Amendments in 1956 established a Special Fund to supplement compensation provided by the longshore program. Amendments in 1959 added a second injury provision to the Special Fund which was designed to encourage employers to hire already disabled or injured workers by limiting employers' liability for subsequent (second) injuries, with necessary additional compensation to be paid from the Special Fund. Revenues for the Special Fund are collected from longshore employers in a manner not related to the claims experience. Expenditures under the Special Fund's second injury provisions have increased dramatically from $30 thousand in 1974 to $23 million in 1983.

A review of the experience of the longshore compensation program and its Special Fund indicates that:

- The recent rapid increase in the cost of the longshore program is a result of the 1972 amendments to the LHWCA which increased benefits and expanded coverage.
- Wage-loss benefits for injured longshore employees replace, on average, 88 percent of pre-injury takehome pay. These high levels of income replacement reduce the economic incentive to return to work.

- Because individual employer payments to the Special Fund are not related to the number of claims that the employer has assigned to the Special Fund, an economic incentive has been created for having employee claims assigned to the Special Fund which spreads liability among the LHWCA employers.
- Decisions by Administrative Law Judges, the Benefits Review Board, and some courts of appeals have broadened the interpretation of a "preexisting injury." These decisions have allowed more people to draw benefits from the Special Fund for claims with questionable relationship to the original purpose of the Special Fund.*

While the longshore program is somewhat different than the black lung program, in recent years it has experienced some of the same problems, especially with the Special Fund. Liberalization of the program and lack of controls have led to rapid growth in costs, some of which have gone to fund benefits that do not appear to be consistent with the original purpose of the program.

The experiences with both the Black Lung and Longshoreman's and Harbor Workers' compensation program illustrate how a program can begin with a worthwhile, narrowly defined purpose, and through gradual expansion, become an income maintenance program for a particular category of people, regardless of the cause of

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* For another review of some of the problems of this fund, see: U.S. General Accounting Office, Longshoremen's and Harbor Workers' Compensation Act Needs Amending, HRD-82-25, April 1, 1982.

disability or death. Thus, the expenditures add significantly to the cost of doing business in this country, with little relationship to the actual health or safety problems involved. What's more, despite increased measures -- many as a result of government regulations -- to decrease risk of injury or illness in the particular fields, the expenditures from the compensation funds continue to increase as new benefits are added to the funds. We are submitting to you a copy of our research on the Black Lung program and will submit the Longshoremen's and Harbor Workers' study when it has been completed.

In addition, there is some more general evidence that income-replacement programs can have other adverse effects on the productivity of the economy. API has examined the most recent empirical economics literature to assess the magnitude of labor force responses in five existing programs (Old Age and Survivor Insurance, Disability Insurance, Unemployment Insurance, Aid to Families with Dependent Children, and Worker's Compensation) and one proposed welfare reform (the Negative Income Tax). Economic theory predicts that each of these programs should adversely affect work effort, and the empirical studies generally provide support for this view. In the case of Worker's Compensation and Social Security Disability Insurance (which deal with some health problems similar to those covered by compensation fund proposals), there is some evidence that the adverse work responses may be sizeable. Among other variables, these negative work effects are associated with the size of benefits, the duration of the benefits, and the ease of qualifying.

The implication of these findings is that the existence of a compensation program induces people to change behavior to qualify for benefits or to stay qualified. Thus, we again see evidence that it will be very difficult to predict accurately the utilization and cost of a compensation fund simply by looking at some list of people who might be eligible. Failure to understand and account for these responses could lead to a substantial underestimate of the costs of a compensation fund.

The Congress should also take note that hazardous waste clean-up by itself is going to be costly, without adding in the costs of compensation for disease claims. The current Superfund Act provides $1.6 billion in clean-up expenditures. The Administration estimates the cost will be in the range of $8 billion to $16 billion. And one environmental organization suggests the figure of $92 billion.

Some proposals include a "cap" on expenditures for a given purpose in any one year in hopes of containing the costs. These caps are often unrealistically low, however, given the experience of other funds, and do not prevent the runaway costs that have characterized other compensation programs.

In addition to studies on the Black Lung and Longshoreman's programs, API is continuing to study other compensation programs such as the Federal Employees Compensation program to see how they work in the real world, and what might be expected from a hazardous substance fund. Information on how these other programs work, both their successes and their failures, may help

ensure that legislation in this area is more responsive to both public need and the national interest in sound public policy.

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In summary, we believe Congress should give careful attention to a number of issues raised by the proposal to create new compensation mechanisms for those injured by exposure to hazardous substances. These issues primarily revolve around the need for such a change; the complex problem of causation, whether or not confused by presumptions; and the high costs that inevitably accompany the creation of new compensation mechanisms. We also urge that any proposed federal causes of action be given careful scrutiny.

PART TWO

Estimated CERCLA Funding Needs

API does not oppose the extension of CERCLA. However, API believes that no change in the size of the Hazardous Substances Response Trust Fund should be made until there is a better understanding of the scope of the problem. EPA is currently working on studies mandated by Congress to address this issue [Section 301(a)]. Congressional action should await an analysis of results of this study.

Estimates of annual funding needs are uncertain because both the total cleanup cost, and the portion of that total cost that must be met by federal taxes are unclear. A wide range of estimates have been made for the number of cleanup sites under the National Priority List (NPL). Estimates of the number of

sites appear to range from 1000 to 2200, making it difficult to arrive at calculation of annual funding needs now.

Annual funding needs will be greatly affected by the portion of cleanup costs that will be born by responsible parties. The EPA has developed guidelines for negotiating with potentially responsible parties that would require agreement to reimburse 80 percent of costs. Should actual experience come close to this goal, the amount of money needed for the Fund would be substantialy below estimates currently being provided in some quarters.

Other factors that affect total funding needs are: cleanup standards, private party cleanups, interest earned on cash balances, annual operation and maintenance costs and other costs that may be subject to recovery from the Hazardous Substances Response Trust Fund. Further, it can reasonably be anticipated that because the most significant sites are addressed first, future cleanup costs would be less than current expenses.

The level of annual funding is also greatly affected by the length of time during which cleanup will occur. Assumptions made by studies estimating total cleanup costs have ranged from 10 to 14 years. A significantly shorter time period for cleanup would raise annual funding needs. All of the foregoing factors are important in assessing future funding needs.

Finally, EPA Administrator Ruckelshaus in recent Congressional testimony warned that "additional infusions" of money at too great a rate had the potential for "building in waste."

Cleanup Standards

The National Contingency Plan now effectively deals with spills or hazardous substances on a site specific basis. API believes that general guidelines are more appropriate than legislation mandating specific cleanup standards.

One area of great concern is groundwater contamination. General guidelines can--but legislatively mandated standards cannot--take into account the broad range of variables that apply to groundwater characteristics and use. Such variables include: local conditions; current and future aquifer use; proximity to population centers and/or sensitive organisms; uniqueness of ecology; hydrogeological setting; persistence, solubility, and biodegradability of pollutants; the quality and quantity of the groundwater; and practicality of cleanup.

Because of the many differences between aquifers, and often even within the same aquifer, specifying cleanup standards in legislation will yield an inflexible, impractical set of standards that will be counterproductive to the overall goal of hazardous waste site cleanup. Aquifers range from drinking water quality to irrigation/livestock watering quality, to highly saline, with little practical use. As a result, it is impractical to define general cleanup standards.

Apportionment of Damages

API believes that those responsible for releases of hazardous substances should bear the cleanup costs. Those parties who voluntarily undertake cleanup efforts should be credited, and not penalized, for their efforts.

There is often a problem identifying which parties and how many parties are responsible for a release. The wastes or substances at sites may have come from many different sources. A single party or group of parties which voluntarily chooses to take action may be cleaning up releases that were not their responsibility. Given the substantial resources needed to effect remedial work, those responding may want to tap the resources of other parties associated with the site. This right, though, is not currently guaranteed under CERCLA. Even the "Good Samaritan" provisions of the act provide little protection for damages to the volunteer. (See CERCLA Section 107(d).)

In addition, when a party feels he may be "partially liable," the "Good Samaritan" protection is effectively defeated. Under the "joint and several" judicial interpretation of the statute, a person can be held entirely responsible for all cleanup costs. Therefore, a person cannot be assured of paying only for the harm he caused. Since many feel that even voluntary cleanup is a tacit admission of guilt, the Good Samaritan may be stuck with the entire cleanup expense, even if he were, at most, only minimally responsible.

Some type of guaranteed damage apportionment is needed to encourage voluntary cleanup. Engaging in a voluntary cleanup should not be viewed as an admission of responsibility. An explicit cause of action allowing the volunteer to seek cost recovery from private parties and/or the fund should be included.

Underground Gasoline Tank Leaks and CERCLA

Several legislative proposals before Congress deal with underground storage tank leaks and some of those proposals suggest amending CERCLA to address such tank leaks.

API believes that Congress should not act until the specific dimensions of the problem have been adequately verified. Until then, effective remedies will be difficult to prescribe. EPA is now moving to better assess the number of leaking tanks and the problems they pose. It would be wise to await the completion of the EPA's current data gathering program before assessing the magnitude and scope of the problem.

Should it be determined that federal legislation is needed, CERCLA is not an appropriate vehicle. Alternatives should be fully explored before any legislation is considered. Further, efforts to address underground storage tank leaks by removal of the CERCLA petroleum exclusion are inappropriate because oil spills are adequately addressed by current state and federal laws. Removal of the petroleum exclusion as suggested in some legislation would place an inequitable burden on suppliers who own but a small portion of tanks and are already spending huge sums to replace tanks.

We understand the potential seriousness of an underground petroleum tank leak. However, information from some of API's member companies, as well as firms involved in the business of cleaning up leaks, suggests that the great majority of leaks are detected and dealt with before they create a problem. Also, the bulk of scientific evidence indicates that the major threat to

groundwater comes from industrial wastes, municipal landfills, agricultural chemicals and septic system and cesspool effluents.

Understandably, these observations are of little comfort to those individuals who are faced with water supplies contaminated by leaking tanks. But a national pollution control program, meant to be a comprehensive solution, should take these observations into account.

API believes that state and local governments are in the best position to establish reasonable and effective regulations for underground gasoline storage tanks. The risks and consequences of tank leaks vary from one area to another, thus making localized response the best solution.

Many state and local governments have already taken steps that go beyond current federal controls to deal with actual and potential spills and leaks of petroleum products. The petroleum industry has cooperated in those efforts whenever possible.

Approximately 42 states have adopted the basic principles established in the National Fire Protection Association's Code which addresses tank system integrity. API worked closely with NFPA in developing the code, and we fully endorse its emphasis on strict inventory control.

In addition to these fire and safety efforts, 19 states have existing or proposed statewide laws relating to the underground storage of petroleum, and many local jurisdictions have enacted such requirements. Many of the laws enacted or proposed cover requirements for petroleum tank permits, equipment specification, installation procedures, secondary containment, tank replacement,

inventory control, testing of tanks, monitoring for leaks and requirements covering the abandonment of underground tanks.

Many oil companies have been aggressively upgrading and replacing suspected tanks with specially protected steel or fiberglass. The number of unprotected tanks owned by the oil companies is likely to be much lower than for other sources and will continue to decrease.

API and its member companies have been actively pursuing voluntary steps for several years. the institute has developed a set of recommended practices designed to protect groundwater through leak prevention, detection, and mitigation measures. we believe that these recommended practices are an effective voluntary means of groundwater protection and could serve as a model for any regulatory effort.

Use of CERCLA to respond to underground storage tank leaks is inappropriate and will dilute government response to releases from abandoned hazardous waste sites. Under CERCLA, government response systems have been developed to respond to extremely complex contamination situations involving scores of response parties. In the instance of underground gasoline tank leaks, the physical conditions are limited (i.e., only one contaminant), the environmental impact is less severe, and there are a relatively limited number of potentially responsible parties. Thus, the likelihood of protracted settlement negotiations or law suits is not as great than with abandoned hazardous waste sites.

The use of CERCLA for underground storage tank leaks could also slow government response to cleanup of abandoned hazardous

waste sites because the release reporting requirement would apply to a very broad spectrum of the nation's fuel supply infrastructure. Included under the law would be corner gasoline stations; federal, state and municipal governments; farmers; fleet operators; pipelines; marketing terminals; railroad tank cars; tank trucks. In addition, the liability provisions of CERCLA could extend financial responsibility to anyone in the chain of commerce.

Removal of the petroleum exclusion in CERCLA has been proposed by some as a means to increase federal protection of groundwater by allowing CERCLA to be used for the cleanup of leaks from underground gasoline storage tanks. However, this

Such a proposal would not be appropriate because it would result in redundant reporting, response and liability requirements. Since the early 1970s the federal government and most states have adopted laws to protect the environment from oil spills and to provide a funding mechanism for spill response and liability.

A number of other federal and state statutes address liability, compensation, and abatement for petroleum spills. Such laws have culminated in specific rules issued by the Environmental Protection Agency, the Department of Interior and the Department of Transportation.

API believes that the problems related to leaking underground tanks should be addressed at the state and local level. If a national program is chosen, it should be based on a better understanding than we have now of the sources and scope of the

overall problem. It is already clear, however, that CERCLA is not an appropriate remedy. It would interfere with reporting and response mechanisms already in place. Other alternatives need to be explored before any legislation is enacted.

ADDITIONAL DOCUMENTS TO BE SUBMITTED FOR THE RECORD *

1. As to the issue of need, the 104(i) consent decree.
2. On the issue of causation, four articles on epidemological studies conducted on mortality rates among refinery workers.
3. On both need and causation, "Difficulties in the Attribution of Causation of Diseases of Human Beings," a paper by Dr. Philip Cole.
4. On cost, a study of the Black Lung fund, prepared by the Policy Analysis Department of API.

*Retained in committee files.

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STATEMENT OF

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Consolidation Coal Company

on behalf of the

AMERICAN MINING CONGRESS

before the

United States Senate

COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS

HEARING ON

REAUTHORIZATION OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980

May 23, 1984

Good morning. My name is Donald J. Bowes. I am manager of Legislated Compensation Programs at Consolidation Coal Company. I am appearing today on behalf of the American Mining Congress (AMC).

AMC is an industry association that encompasses (1) producers of most of America's metals, coal, and industrial and agricultural minerals; (2) manufacturers of mining and mineral processing machinery, equipment and supplies, and (3) engineering and consulting firms and financial institutions that serve the mining industry. AMC appreciates the opportunity to share with the committee some of our industry's concerns regarding the reauthorization of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund) and recently introduced reauthorization legislation.

The mining industry is prepared to work with Congress and the Administration to develop an effective means of addressing problems that have arisen out of past mining activity.

The nature, volume and toxicity of mining and mineral processing wastes differ significantly from wastes generated by other industries. These factors, as well as others, create special problems and consequences for addressing abandoned mine sites and mining wastes under CERCLA. These differences need to be taken into account in any legislation to amend CERCLA. To do otherwise could result in serious, inequitable impacts on a domestic minerals industry already faced with economic problems of major proportions.

At the outset, AMC wishes to note that there have been expressions of concern in the past that the mining industry has not paid its "fair share" of Superfund taxes. Some parties have even been under the mistaken impression that the mining industry has paid no taxes. The fact is that the mining industry has, since April 1, 1981, paid Superfund taxes. Our industry's contributions, by our own unofficial calculations, appear equivalent to the number of mining-related sites on the National Priorities List (NPL)--about four percent.

We want to assure the members of this committee that the mining industry can and does recognize the realities and the pressures that argue for CERCLA reauthorization. It would appear that many more sites will eventually be listed on the NPL, and that other sites will require emergency cleanup or removal actions. The presures are compounded by an apparent inadequacy of the current CERCLA funding mechanism to supply monies needed for all sites now on the NPL as well as future site requirements.

However, some of the revenue-raising methods proposed are of great concern to the domestic minerals industry.

First, it is likely that any expanded list of taxable commodities and rates for a "front-end" tax will, if invoked, pose a further burden on an industry already beset with serious economic problems.

"Waste-end" tax provisions are of equal concern. The minerals industry produces enormous volumes of relatively

innocuous waste due to the nature of mineral occurrence and processing.

In the debate leading to the passage of CERCLA in 1980, Congress emphasized the need for cleaning up the problems associated with chemical waste disposal. Congress did not conclude that conventional mining and mineral processing wastes posed an equivalent potential danger to public health. In fact, Congress recognized the need for special consideration for such wastes.

There are many significant differences between wastes from mining and mineral processing operations and those of other industries, including the volumes of wastes generated, their stability and their degree of toxicity to life forms.

Mining and mineral processing generally utilize low grade ores, which result in the production of large volumes of waste rock, overburden, slag and tailings. Due to the presence of minor amounts of metals in the natural rock matrix, these wastes may sometimes be administratively classified as "hazardous" even though they exhibit little or no toxicity.

There are other industries that generate relatively small amounts of residuals that in themselves or by the presence of chemical contaminants are hazardous and may be extremely toxic in small amounts to human and other life forms. These are the residuals that were the focus of Superfund, not mining and mineral processing wastes.

It is essential that any amendments to CERCLA reflect the differences between mining wastes and other wastes that present a substantially greater risk of toxicity. Although mining and mineral processing wastes are part of the overall environmental issue of prudent waste management, they are not significant in terms of relative impact on public health.

The following points should be considered in CERCLA amendments if gross inequities are to be avoided:

1) Mining and mineral processing generate high volumes of wastes that exhibit little or no toxicity.

2) Mining and mineral processing waste disposal practices other than landfill and/or surface impoundments are infeasible, except for certain relatively small quantity wastes.

3) Domestic prices are largely determined by the highly competitive international market (and not by domestic producers), causing an unfair burden on the domestic industry whenever government-mandated costs do not fall equally on imports.

4) A "front-end" or "waste-end" tax could have serious, unintended and inequitable effects on the domestic mining and mineral processing industry because of the unique economic circumstances of the minerals industry and the differences between its wastes and the wastes of many other industries.

5) Because of the large volumes and low toxicity of mining and mineral processing waste and other factors, the current EPA Hazard Ranking System is inappropriate for mining and mineral processing sites.

6) Minerals extraction and processing activities have occurred in the United States since before the Revolutionary War. Consequently, the chain of ownership for many sites is difficult if not impossible to establish.

An expanded list of taxable materials apparently would be based on the presumption that all sites on the NPL present hazards to human health. There is a further presumption that, if certain metals are found at NPL sites, they are inherently harmful and should be taxed. As stated earlier, these assumptions are not correct for mining wastes.

Some waste-end tax proposals clearly have not taken into account the possibility that some high volume, low toxicity wastes may be listed through future rulemaking as "hazardous wastes" under RCRA because of the presence of trace metals. In the lead industry, a ton of ore produces approximately 120 pounds of lead that would sell for about $30, while producing almost a ton of waste. That ton of waste under some proposals would generate a $10 tax. That would amount to a huge tax on an industry where profit margins, if any, are measured in pennies per pound and very low percentages.

Waste-end tax provisions ostensibly are intended to reduce waste generation and discourage land disposal. A tax on mining and mineral processing wastes would only increase costs without furthering these goals. Furthermore, waste-end tax provisions would place a burden on the domestic industry that would not apply to imports. H.R. 5640 recognizes the potential problems with a waste-end tax and prohibits such a tax on mining wastes unless Congress, after considering studies currently underway, decides to enact appropriate legislation specifically imposing such a tax.

Many joint and several liability proposals advanced thus far in Congress do not recognize the difficulties involved in allocating responsibility for activities occurring generations ago. We see no need to mandate the imposition of joint and several liability in all cases. Under current law, the government has an exceedingly successful record in imposing joint and several liability on responsible parties.

We recognize that joint and several liability can be a useful weapon in the government's arsenal, inducing potentially responsible parties to cooperate in serious settlement negotiations. Congress should clearly confirm that an equally successful weapon--apportionment of liability based on contribution to the problem--is also in the government's arsenal. Defendants, of course, bear the burden of proving the existence of a reasonable basis for apportionment. Such reasonable limitations on the extent of liability also are inducements for responsible parties to come forward, both to negotiate and to clean up sites.

The victim compensation provisions are, in our opinion, premature and should not, in any event, be included in CERCLA reauthorization. We believe there are two separate issues--the cleanup of problem waste disposal sites, and the compensation of persons affected by hazardous substances in the environment, whatever the source.

Finally, there are two studies that should be taken into consideration by Congress prior to including mineral products or wastes in any CERCLA reauthorization. The first is the President's report, mandated by CERCLA §301, on whether to continue the exemption or increase the tax on copper, lead and zinc oxide.

The second report is that mandated under Section 8002 of the Solid Waste Disposal Act on mining and mineral processing wastes. AMC understands that EPA intends to submit that report to Congress by mid-1985.

Both reports will have direct bearing on the impact of CERCLA and the Solid Waste Disposal Act on our industry.

AMC appreciates the opportunity to appear before this committee and we will attempt to answer any questions you may have.

TESTIMONY OF

R.J. BAUER

CHAIRMAN,

WASHINGTON CONFERENCE FOR ZINC, INC.

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BEFORE THE

SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

MAY 23, 1984

I AM R.J. BAUER, PRESIDENT OF EASTERN ALLOYS, MAYBROOK, NEW YORK, CHAIRMAN OF THE WASHINGTON CONFERENCE FOR ZINC, INC., WITH OFFICES AT 900 17TH STREET, N.W., WASHINGTON, D.C. 20006.

THE WASHINGTON CONFERENCE FOR ZINC GREW OUT OF A MEETING IN WASHINGTON ON THE SUPERFUND REAUTHORIZATION LEGISLATION. ATTENDING THE MEETING WERE MANY SEGMENTS OF THE ZINC INDUSTRY, INCLUDING U.S. AND FOREIGN PRODUCERS, INDEPENDENT ALLOYERS, TRADING COMPANIES, AND HOT DIP GALVANIZERS. THE INDUSTRY WAS BRIEFED BY HOUSE AND SENATE STAFF PERSONNEL ON THE INCLUSION OF ZINC IN BOTH THE "FEEDSTOCK" AND "WASTE-END" PROVISIONS OF THE SUPERFUND REAUTHORIZATION BILL BEING CONSIDERED BY A COMMITTEE OF THE HOUSE.

THE WASHINGTON CONFERENCE FOR ZINC REALIZES THE IMPORTANCE OF THE CLEANUP OF HAZARDOUS WASTE SITES. HOWEVER, WE ASK THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS TO ACCOMPLISH ITS PURPOSE WITHOUT SWEEPING IN AN INDUSTRY THAT IS CURRENTLY RECOVERING FROM ECONOMIC SETBACKS AND HAS NOT BEEN INVOLVED IN GENERATING TOXIC OR HAZARDOUS WASTE THROUGH EITHER THE USE OF ITS RAW MATERIAL, SLAB ZINC, OR THE PRODUCTION OF ITS PRODUCT, ZINC ALLOY. THE INCLUSION OF ZINC AS A HAZARDOUS SUBSTANCE WITHIN THE SUPERFUND REAUTHORIZATION WOULD HAVE GRAVE CONSEQUENCES ON THE ZINC INDUSTRY WITH REPERCUSSIONS FELT IN MANY CONSUMER PRODUCT INDUSTRIES.

ZINC IS AN ESSENTIAL AND VERSATILE MINERAL, RANKING FOURTH IN TONNAGE PRODUCTION FOLLOWING STEEL, COPPER AND ALUMINUM. THE ZINC INDUSTRY EXERTS WORLDWIDE INFLUENCE IN MINING, SMELTING AND TRADE.

ZINC INDUSTRY OPERATIONS CONSIST OF MUCH MORE THAN EXTRACTION OF THE MINERAL FROM THE GROUND. PRODUCTION, ALLOYING, DIE CASTING, BRASS AND BRONZE PRODUCTION AND GALVANIZING ARE THE MAJOR SEGMENTS OF THE ZINC METAL INDUSTRY, EACH PROVIDING A LIVELIHOOD FOR THOUSANDS OF AMERICANS, AS WELL AS EVERYDAY CONSUMER ITEMS WITHOUT WHICH WE WOULD ALL BE AT A LOSS.

PRODUCTION IS THE SEGMENT IN WHICH ZINC ORES AND CONCENTRATES ARE MINED AND SMELTED TO PRODUCE SLAB ZINC.

ALLOYING IS THE SEGMENT IN WHICH ZINC IS MELTED AND MIXED WITH OTHER METALS. ALLOYERS SUPPLY THE CASTING AND FORGING INDUSTRIES WHO PRODUCE COMPONENTS FOR AUTOMOTIVE, BUILDER'S HARDWARE, ELECTRIC UTILITIES, ELECTRONIC PRODUCTS AND NUMEROUS OTHER CONSUMER ITEMS.

DIE CASTING, THE SECOND LARGEST MARKET FOR ZINC, IS USED WIDELY IN THE AUTOMOTIVE INDUSTRY. HOWEVER, DIE CASTERS PRODUCE PARTS FOR A VARIETY OF OTHER CONSUMER ITEMS INCLUDING: SOUND AND TELEVISION EQUIPMENT; SCIENTIFIC AND PRO-

FESSIONAL EQUIPMENT; SPORTING GOODS AND TOYS; INDUSTRIAL, AGRICULTURAL AND COMMERCIAL MACHINERY; AND, DOMESTIC APPLIANCES.

BRASS PRODUCTION ACCOUNTS FOR APPROXIMATELY ONE-FIFTH OF THE WORLD'S ZINC CONSUMPTION. BRASS, AN ALLOY OF ZINC AND COPPER, HAS MANY APPLICATIONS. BECAUSE OF IT'S NON-CORROSIVE NATURE, ATTRACTIVE COLOR AND FORMABILITY, BRASS IS IDEAL FOR USE IN PLUMBING GOODS, BUILDER'S HARDWARE, APPLIANCES, AND JEWELRY.

GALVANIZING, THE LARGEST DEMAND SECTOR FOR ZINC, REFERS TO THE PROCESS IN WHICH ZINC IS APPLIED TO STEEL AS A PROTECTIVE COATING OR PLATING. THE PRIMARY MARKET FOR GALVANIZED STEEL IS IN THE BUILDING AND CONSTRUCTION INDUSTRIES. THE RELATIVE LOW COST, GOOD MECHANICAL PROPERTIES AND CORROSION RESISTANCE MAKE ZINC IDEAL FOR SUCH USE. GALVANIZED STEEL IS ALSO USED FOR UNDERBODY PARTS OF MANY CARS AS A PROTECTIVE SHIELD AGAINST CORROSION.

ALTHOUGH ZINC HAS BEEN NAMED IN THE CLEAN WATER ACT AND BY REFERENCE IN THE RESOURCE CONSERVATON AND RECOVERY ACT, THE SAFE DRINKING WATER ACT, AND THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT, IT IS IMPORTANT TO LOOK AT THE CONTEXT OF THE LIMITED INCLUSIONS BEFORE LABELING ALL ZINC AS HAZARDOUS IN THE SUPERFUND REAUTHORIZATION.

THE CLEAN WATER ACT PROVIDES FOR A LISTING OF HAZARDOUS SUBSTANCES AND TOXIC POLLUTANTS. UNDER SECTION 311 OF THE CLEAN WATER ACT, EPA HAS REGULATED DISCHARGE OF HAZARDOUS SUBSTANCES INTO NAVIGABLE WATERS AND HAS NAMED ONLY CERTAIN COMPOUNDS OF ZINC AS HAZARDOUS.

ZINC ALSO IS LISTED AS NUMBER 128 OF 129 TOXIC POLLUTANTS UNDER SECTION 307 OF THE CLEAN WATER ACT FOR THE PURPOSE OF REGULATING EFFLUENT DISCHARGES.

EPA, IN ADOPTING LIMITATIONS UPON EFFLUENTS INVOLVING ZINC, IS REQUIRED TO LOOK AT THE ZINC CONTENT OF EFFLUENTS ON AN INDUSTRY-BY-INDUSTRY BASIS BEFORE ADOPTING EFFLUENT RESTRICTIONS. SECTION 304 OF THE CLEAN WATER ACT REQUIRES THAT EPA ESTABLISH AMBIENT WATER CRITERIA FOR EACH OF THE TOXIC POLLUTANTS LISTED IN SECTION 307. THE CRITERIA DOCUMENTS ARE REQUIRED TO REFLECT THE LATEST SCIENTIFIC KNOWLEDGE ON THE KIND AND EXTENT OF ALL IDENTIFIABLE EFFECTS ON HEALTH AND WELFARE EXPECTED FROM THE POLLUTANTS IN ANY BODY OF WATER.

THE AMBIENT WATER QUALITY CRITERIA DOCUMENT FOR ZINC PUBLISHED BY EPA IN 1980, STATES THAT THE "TOXICOLOGICAL DATA BASE FOR EVALUATING WATER QUALITY CRITERIA FOR ZINC IS INADEQUATE. WHILE THERE IS NO EVIDENCE THAT ZINC IS CARCINOGENIC, THERE IS A LACK OF USABLE DATA ON CHRONIC

EFFECTS." (PAGE C-60) THE DOCUMENT ALSO SAYS: "THE PRESENCE OF ZINC IN DRINKING WATER CONTRIBUTES TO THE RECOMMENDED DAILY ALLOWANCE FOR THIS ESSENTIAL METAL."

UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT, EPA CLASSIFIED TWO FORMS OF WASTE FROM PRIMARY PRODUCTION OF ZINC AND THREE ZINC COMPOUNDS OF ZINC AS HAZARDOUS. ONCE AGAIN NEITHER SLAB NOR ZINC ALLOY WAS INCLUDED.

FURTHERMORE, UNDER THE SAFE DRINKING WATER ACT, THE PRIMARY DRINKING WATER STANDARDS INTENDED BY CONGRESS FOR THE PROTECTION OF PUBLIC HEALTH DO NOT INCLUDE ZINC. SECONDARY DRINKING WATER, E.G., ODOR, TASTE, ETC., ARE NOT MANDATORY, AND HERE ZINC IS INCLUDED WITH IRON, SULFATES, CHLORIDES AND OTHERS. HOWEVER, ZINC CARRIES A MUCH HIGHER ACCEPTABLE LEVEL IN THESE STANDARDS THAN IRON.

THIS IS STRONG EVIDENCE THAT CONGRESS IN EARLIER DELIBERATIONS ON ENVIRONMENTAL LEGISLATION DID NOT CONSIDER ALL ZINC TOXIC AND ENVIRONMENTALLY HAZARDOUS. ADDITIONALLY, THE LABELING OF ALL ZINC AS A HAZARDOUS SUBSTANCE FOR PURPOSES OF SUPERFUND REAUTHORIZATION, WITHOUT CONSIDERING CONGRESS' INTENT WITH RESPECT TO THIS METAL IN EARLIER LEGISLATION, COULD HAVE SEVERE ECONOMIC CONSEQUENCES FOR THE ZINC INDUSTRY IN THE UNITED STATES.

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THE WASHINGTON CONFERENCE FOR ZINC RECOGNIZES THAT THIS COMMITTEE MAY ADD OTHER METALS TO SUPERFUND TO BROADEN THE TAX BASE AND RAISE ADDITIONAL MONIES FOR CLEANUP OF HAZARDOUS WASTE SITES. HOWEVER, BEFORE DOING SO, WE ASK YOU TO CONSIDER THE DETRIMENTAL EFFECTS ON THE ZINC INDUSTRY OF DECLARING ZINC A HAZARDOUS SUBSTANCE.

THE ZINC INDUSTRY HAS HAD A DIFFICULT TIME IN THE PAST DECADE AND ITS RECOVERY IS TENUOUS. THE MINING AND REFINING OF ZINC HAS DECLINED IN THE U.S. OVER THE PAST DECADE WHILE IT HAS INCREASED IN THE REST OF THE WORLD. U.S. MINE PRODUCTION OF ZINC HAS FALLEN DRAMATICALLY SINCE 1970, LARGELY BECAUSE OF DECLINING ORE QUALITY AND A SUBSTANTIAL REDUCTION IN DOMESTIC REFINING CAPACITY.

U.S. PRODUCTION OF SLAB ZINC HAS DECLINED EVEN MORE DRAMATICALLY OVER THE PAST TWELVE YEARS THAN U.S. MINING PRODUCTION. U.S. PRODUCTION DROPPED FROM 868,200 METRIC TONS IN 1970 TO 254,300 METRIC TONS IN 1982, A 70 PERCENT DECLINE.

DOMESTIC CAPACITY HAS DECLINED SINCE 1979 AND REFLECTS, AMONG OTHER FACTORS, A DECREASED DEMAND FOR ZINC BY ITS TWO MAJOR CONSUMERS: THE AUTOMOBILE AND CONSTRUCTION INDUSTRIES. THE AVERAGE 1975 MODEL YEAR

AMERICAN CAR CONTAINED 61.7 POUNDS OF ZINC, YET BY 1978 THE AVERAGE NEW CAR CONTAINED ONLY 36.5 POUNDS, LARGELY DUE TO THE RESULT OF REPLACEMENT OF ZINC BY PLASTICS AND ALUMINUM.

IN RESPONSE TO DECLINING SMELTING CAPACITY, THE TOTAL AMOUNT OF IMPORTED ZINC CONCENTRATE HAS FALLEN SIGNIFICANTLY. THE U.S. NOW INCREASINGLY RELIES ON THE IMPORTATION OF REFINED ZINC METAL. ACCORDING TO A STUDY BY THE CONGRESSIONAL BUDGET OFFICE FOR THE CONGRESS JUST PUBLISHED, THE U.S. WAS 66% RELIANT UPON IMPORTS OF ALL FORMS OF ZINC IN 1983. ADDITIONALLY, IMPORTERS OF SLAB ZINC MUST PAY THE CURRENT 1.7% AD VALOREM DUTY ON IMPORTED SLAB ZINC.

THE ADDITION OF A $14.94 PER TON TAX ON ZINC LIKE THE ONE PROPOSED IN H.R. 5640 MAY PREVENT THE ZINC INDUSTRY FROM REALIZING A SUCCESSFUL RECOVERY. IT MAY MEAN MORE REVENUES FOR THE CLEANUP OF HAZARDOUS WASTE SITES. HOWEVER, IT MAY FORCE FURTHER RELIANCE ON PLASTICS, A MORE TOXIC AND HAZARDOUS SUBSTANCE, AS A SUBSTITUTE MATERIAL. HEAVY RELIANCE UPON ZINC IMPORTS IN THE U.S. ALREADY ADDS A 1.7% AD VALOREM DUTY BURDEN ON ZINC'S MARKET POSITION.

CONGRESS HAS NOT, IN PRIOR ENVIRONMENTAL LEGISLATION, CONCLUDED THAT ZINC METAL IS ENVIRIONMENTALLY HAZARDOUS. THERE IS NO JUSTIFICATION FOR ALTERING THAT CONGRESSIONAL JUDGEMENT AND INTENT. ZINC, EXCEPT FOR SOME SPECIFIC ZINC COMPOUNDS, WAS EXCLUDED FROM THE 1980 SUPERFUND ACT AND SHOULD BE EXCLUDED AGAIN.

AT PRESENT, IT APPEARS THAT A STUDY IN DRAFT FORM PREPARED FOR EPA PURSUANT TO SECTION 301 (A)(1)(H) OF THE 1980 SUPERFUND ACT IS BEING USED AS THE BASIS TO INCLUDE ZINC IN THE CURRENT HOUSE BILL WHICH IS LIKELY TO BE CONSIDERED BY THE SUBCOMMITTEE ON COMMERCE, TRANSPORTATION AND TOURISM THIS AFTERNOON. WE BELIEVE THAT THE DATA IN THE EPA STUDY IS NOT SPECIFIC ENOUGH TO JUSTIFY INCLUDING ZINC METAL UNDER THE "HAZARDOUS SUBSTANCE" UMBRELLA OF SUPERFUND. THE STUDY RELIES UPON A FINDING OF SOME UNIDENTIFIED FORMS OF ZINC AT WASTE SITES AND DOES NOT INDICATE THE AMOUNTS OF ZINC OR ZINC COMPOUNDS FOUND AT WASTE SITES. MORE INFORMATION IS NEEDED AND COMPILED BEFORE CONSIDERING NAMING ALL FORMS OF ZINC METAL AS HAZARDOUS FOR PURPOSES OF THE SUPERFUND REAUTHORIZATION.

ZINC HAS NO KNOWN ADVERSE PHYSIOLOGICAL EFFECTS UPON MAN EXCEPT AT VERY HIGH CONCENTRATIONS ACCORDING TO MCKEE AND WOLF.[1] IN FACT, ZINC IS AN ESSENTIAL MINERAL FOR THE GROWTH AND DEVELOPMENT OF ALMOST ALL LIFE, FROM MICROORGANISM TO MAN. MAN'S ESTIMATED DAILY INTAKE OF ZINC IS ABOUT 10-15 MG, CLOSE TO THE U.S. RECOMMENDED DAILY ALLOWANCE OF 15 MG.

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1 MCKEE, J.E. AND H.W. WOLF, "WATER QUALITY CRITERIA," CALIFORNIA WATER POLLUTION CONTROL BOARD, PUBLICATION 3-A, PP. 294-298

ZINC IS NATURALLY PRESENT IN WATER IN CONCENTRATIONS GENERALLY WELL BELOW THE CURRENT DRINKING WATER STANDARD OF 5 MG/1, EPA STUDY, 1980.[2] FROM 1942 TO 1962, THE LIMIT HAD BEEN 15 MG/1 BUT WAS LOWERED BECAUSE THE TASTE THRESHOLD FOR ZINC IN DRINKING WATER OCCURS AT 5 MG/1. IT WOULD APPEAR THEN, THAT THE CURRENT 5 MG/1 LIMIT IS CONSERVATIVE INSOFAR AS PHYSIOLOGICAL EFFECTS ARE CONCERNED (MCKEE).

FURTHERMORE, DRINKING WATER SUPPLIES CONTAINING LEVELS OF ZINC RANGING FROM 11.2 TO 40.8 MG/1 HAVE BEEN USED WITH NO HARMFUL EFFECTS. SOME STUDIES GIVE EXAMPLES OF WATER CONTAINING UP TO 50 P.P.M. OF ZINC WITHOUT ANY EVIDENCE OF DELETERIOUS EFFECT. OTHERS CONSIDER 30-40 P.P.M. REASONABLE AND SAFE. EMETIC CONCENTRATIONS OCCUR AT 700-2300 P.P.M., SEE MCKEE.

THE NUMEROUS ACADEMIC STUDIES CONDUCTED ON THE TOXICITY OF ZINC ARE BASED ON WIDELY VARIANT ASSUMPTIONS AND DATA. IN THE CASE OF ZINC'S TOXICITY TO FISH, THE SOLUBILITY AND TOXICITY OF ZINC IS GREATLY INFLUENCED BY THE PH, ALKALINITY, HARDNESS AND TEMPERATURE OF THE WATER IN WHICH ZINC IS FOUND.

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2 "AMBIENT WATER QUALITY CRITERAI FOR ZINC," ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER REGULATIONS AND STANDARDS, OCTOBER, 1980.

THE INFLUENCE OF EACH OF THESE FACTORS ALSO GREATLY VARIES WITH DIFFERENT TEST FISH. THEREFORE, ANY STATEMENT COMPARING THE TOXICITY OF ZINC WITH ANOTHER METAL, OR WITH A CHEMICAL, MUST TAKE ALL THESE FACTORS INTO CAREFUL CONSIDERATION. FURTHERMORE, THE AMOUNTS OF ZINC ADDED TO WATER SAMPLES UNDER TEST CONDITIONS WERE CONSIDERED TO BE EXTREME OVERDOSES.

THANK YOU FOR THE OPPORTUNITY TO PRESENT THIS TESTIMONY.

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NATIONAL ASSOCIATION OF LOCAL GOVERNMENTS ON HAZARDOUS WASTES

MEMBERS

Tucson Fire Department
Tucson, AZ

New Castle County, DE

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Public Health, TX

City of Houston, TX

City of Richland, WA

City of Tacoma, WA

TESTIMONY OF

JOSEPH TELLER

DEPUTY GENERAL MANAGER

GULF COAST WASTE DISPOSAL AUTHORITY

ON BEHALF OF THE

NATIONAL ASSOCIATION OF LOCAL GOVERNMENTS

ON HAZARDOUS WASTES

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

U.S. SENATE

WASHINGTON, D.C.

May 23, 1984

Good morning, Mr. Chairman and members of the Committee. My name is Joseph Teller, Deputy General Manager of the Gulf Coast Waste Disposal Authority in Houston, Texas. I am here today as Vice President of the National Association of Local Governments on Hazardous Wastes. This organization is comprised of a national cross-section of large and small cities, counties and other local entities who established this Association in response to the pressing need for local governments to take a strong and active role in hazardous waste management policy issues. We welcome the opportunity to present our views regarding reauthorization of the Comprehensive Environmental Response Compensation and Liability Act.

Federal programs currently provide no specific authority for local officials in hazardous waste policy development and program implementation, despite local contact with and ultimate responsibility for all facets of hazardous waste management. A primary purpose of our Association is to give local officials and their directors a voice in decisions made by Congress and the EPA on hazardous waste programs and funding.

Another major purpose of our Association is to promote the development of strong and effective hazardous waste management programs at the local level, for there is a need for local governments to establish clear and comprehensive policies and programs to protect the public health and the environment from hazardous waste threats. For example, we believe local governments should:

- Provide a mechanism to develop local data on existing hazardous waste facilities and generators
- Identify existing sources of hazards
- Establish hazardous waste management plans, including contingency plans for emergency response
- Review and, as appropriate, revise ordinances to provide clear and reasonable rules governing hazardous waste management

- o Establish rules and practices for the management of locally owned facilities
- o Establish training programs where appropriate and increase public awareness
- o Take an active role in state and Federal permit proceedings with regard to Federal environmental legislation.

We urge all local governments to realize the importance of coping with past, present and future hazardous waste problems. Local government officials cannot assume that Federal and state programs, however well defined and funded, will adequately address local problems and protect their citizens from harm. Local governments must make hazardous waste management a regular element of their planning and management effort in order to respond effectively to the growing national hazardous waste problem. Congress can provide assistance by assuring that local governments have input, adequate funding, and scientific assistance within the context of the overall national effort.

The National Association of Local Governments on Hazardous Wastes commends this Committee's continued interest and dedication in addressing critical hazardous waste management issues. We support the program established by Superfund and strongly recommend reauthorization of Superfund for an additional four years. We will, however, make recommendations about how the statute can be improved to meet the needs of local governments.

When Congress enacted this landmark legislation in 1980, the scope and extent of the national hazardous waste problem suggested that an exclusively Federal and state regulatory approach would satisfy the concerns of the public and address existing threats. We believe that experience since 1980 suggests that Congress should reconsider this policy and provide a much stronger role for local governments in the process. Mr. Chairman, it is the local official who wakes up to learn that a hazardous waste site is threatening his or her community. It is the local

official's constituents who are directly impacted by this threat. And, it is the local official who has both the perceived and the actual responsibility to take appropriate first steps to mitigate the threat and protect the public health and welfare.

We have carefully reviewed both Superfund and the Resource Conservation and Recovery Act (RCRA) to identify areas where the local official's involvement would enhance proper hazardous waste management and clean-up responses. The Resolutions of our Association which cover these areas are attached to our testimony. I would, however, like to take this opportunity to bring to your attention several critical issues that we believe deserve your immediate attention and consideration as you proceed to reauthorize this important legislation. I would like briefly to highlight our recommendations. We would welcome the opportunity to refine these recommendations at a later time with the Committee:

- o Local participation: NALGOHW recommends that Congress modify the existing statutory framework to encourage the active participation by local government officials in all Federal and state actions taken to mitigate or clean-up hazardous waste sites threats. It is particularly important for Congress to direct meaningful participation by local governments in the development of any clean-up plan prior to the public comment period.

- o Transportation: NALGOHW recommends that Congress retain existing policies and practices which recognize local government authority to regulate the safe transportation of hazardous substances through their communities. Local government authority to specify the times, routes and procedures to be followed in the transport of hazardous substances must be maintained, provided such actions do not constitute undue burdens on interstate commerce. While this recommendation has general applicability in the hazardous waste management area, it is particularly evident in cases involving the transportation of hazardous substances from emergency response areas.

- o National Priority List: NALGOHW urges Congress to authorize local governments as well as citizens to petition for specific sites for inclusion on the National Priority List.

- o Local Liability: NALGOHW urges Congress to enact provisions limiting the liability of local officials in cases where the local government is clearly not the responsible party, such as bankruptcies and "walk-aways". I refer to this issue later in my statement.

- o Local Reimbursement: NALGOHW urges the Congress to authorize the reimbursement to local governments for actions taken to abate site threats. NALGOHW further urges the Congress to authorize funding for local governments to address locally initiated emergency responses.

- o Technical Assistance: NALGOHW urges the Congress to provide technical assistance to local communities, including grants for local program development, coordination of local activities with Federal and state programs, and public education.

Our members appreciate the continued need for Superfund legislation to address hazardous waste site emergencies. At the same time, we recognize that the nation will only solve the hazardous waste problem through the development and implementation of strong programs for managing future practices and encouraging innovative and alternative technologies. Accordingly, our recommendations concerning Superfund are equally applicable to the reauthorization of the Resource Conservation and Recovery Act (RCRA). The need for strong and effective local programs in this area is just as important.

The problem of inheriting a locally abandoned or bankrupt hazardous waste site can be a disaster for a local government and is of primary concern to members of our Association. Under RCRA--at least as interpreted by a large number of states -- if a local government "inherits" hazardous wastes either by taking over abandoned property or by finding and removing wastes which are illegally dumped on the street, the local government can be viewed by higher levels of governments as the responsible party and can be held liable by the state or Federal government for clean-up of those wastes. Similar situations exist in the Superfund area, both with regard to abandoned or bankrupt property as well as donated property that years later is determined to pose a serious hazardous waste threat to the local community.

To address these problems, it is imperative that Congress review both Superfund and RCRA to allow for "a caretaker" status for wastes which are found and removed by a local government acting to protect the public health and safety. This status should allow the locality to seek Superfund assistance for both emergency and non-emergency situations where wastes have been dumped on public property or where wastes have been abandoned on private property by bankrupt corporations and where the local government subsequently forecloses on that property and takes title to it due to non-payment of property taxes. Rather than requiring a local government to have a generator identification number as if it were a waste producer, a separate status code -- such as a caretaker identification number -- would still allow the clean-up to take place and to fit within the manifest system. This approach would not create the unfair liability question currently faced by all local governments. I offer the interest and services of our Association in assisting you in this effort.

Mr. Chairman, the Association strongly supports the Committee's efforts to assure the ability of all levels of government to respond to the nation's hazardous waste site threats and to minimize future environmental and human health dangers. It is clear the effort to address the improper disposal methods of the past requires re-authorization or Superfund this year.

We cannot emphasize enough the need for Congress to create a full partnership between Federal, state and local officials. The local official must play an important part in the hazardous waste management picture if the nation is to respond effectively and efficiently to environmental and human health threats posed from improper hazardous waste management practices. The active participation of local governments in the process will ensure a comprehensive effort to minimize hazardous waste site dangers throughout the nation.

Thank you.

NATIONAL ASSOCIATION OF LOCAL GOVERNMENTS ON HAZARDOUS WASTES

RESOLUTIONS

1984 - 1985

1. SITING OF FUTURE HAZARDOUS WASTE MANAGEMENT FACILITIES

Resolution:

The National Association of Local Governments on Hazardous Wastes recommends that the Federal government develop a policy ensuring that final siting decisions rest with State officials, after local consultation.

Rationale:

1. Future hazardous waste treatment, storage and disposal capacity is critical to safeguard the health and environment of a community.

2. State and local government officials have the best data about their areas with regard to the impact of any proposed hazardous waste facility upon natural resources, economic development, and human health.

3. Local and State government officials are in the best position to conduct necessary public hearings and to scrutinize proposed siting plans of proposed facilities.

2. REAUTHORIZATION OF SUPERFUND

Resolution:

The National Association of Local Governments on Hazardous Wastes urges Congress to reauthorize Superfund for an additional four years, and to include coverage of oil spills.

Rationale:

1. Original needs of Superfund were projected at $6 billion, but only $1.6 billion was authorized.

2. The problems with hazardous waste sites have only begun to be addressed, requiring continued need for the program.

3. Future potential waste site threats are expected to grow as waste site surveys and monitoring results are evaluated. For example, since 1980, an additional 40,000 municipal landfills have been identified bringing their total number to 90,000 across the country. Such sites carry the potential of becoming new Superfund priority waste sites.

3. HAZARDOUS WASTE CLEAN-UP AND LOCAL PARTICIPATION

Resolution:

The National Association of Local Governments on Hazardous Wastes recommends modification of the existing statutory and regulatory framework to encourage the active participation by local government officials in all Federal and State actions taken to mitigate or clean-up hazardous waste site threats. This should include commitments to reimburse local governments for any costs they incur in responding to hazardous waste threats.

Rationale:

1. Responses to hazardous waste site threats, as detailed by the National Contingency Plan (NCP), fail to provide requirements or procedures for local government impact in the development of plans to respond to hazardous waste threats.

2. Implementation of any clean-up plan has serious effects upon the local community's economy and health. Provisions in the NCP providing for local participation with State, Federal and private clean-up firms should be required to facilitate communications during the clean-up process.

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4. TRANSPORTATION OF HAZARDOUS SUBSTANCES

Resolution A:

The National Association of Local Governments on Hazardous Wastes urges the Federal government to develop a uniform hazardous wastes manifest to monitor the transport of hazardous wastes from generator to disposal and to require its use in all instances of hazardous waste transportation. As part of this manifest, space should be provided to allow local officials to add necessary information requests pertinent to the affected local community.

Rationale:

1. Transportation of hazardous wastes affects a community's safety on a 24-hour basis.

2. "Midnight" dumpers, in the past, have illegally discharged hazardous wastes.

3. A uniform manifest would provide local law and health officials with an efficient source of information during "spot" inspections to assure that transported materials complied with state manifest and destination.

Resolution B:

The National Association of Local Governments on Hazardous Wastes urges Congress to retain existing policies and practices which recognize local government authority to regulate the safe transportation of hazardous substances through their communities. Local Government authority to specify time, routes and procedures to be followed in the transport of hazardous substances must be maintained, provided such actions do not constitute undue burdens on interstate commerce.

Rationale:

1. Many hazardous substances are so toxic that any accident could result in serious health and economic losses to the community.

2. To minimize the likelihood of any accident, local transportation officials must retain authority to establish timetables, routes and procedures to be followed that would pose the least threat to the community.

5. REVISING THE NATIONAL PRIORITY LIST

Resolution:

The National Association of Local Governments on Hazardous Wastes recommends the adoption of procedures requiring State officials to consult with local officials in the process of developing recommendations to be submitted to the Environmental Protection Agency for National Priority List (NPL) inclusion.

Rationale:

1. Current law directs only States to submit NPL candidate sites to EPA.

2. Local communities have specific data and background about waste sites that could be of use to States and EPA in establishing Superfund priority waste sites.

3. Lack of local government input into the listing process for site priorities may lead to inappropriate and insufficient priority setting.

6. LIABILITY OF LOCAL GOVERNMENTS

Resolution:

The National Association of Local Governments on Hazardous Wastes recommends that Congress enact legislation amending Superfund to limit local governments liabilities associated with hazardous waste management and subsequent clean-up related activities.

Rationale:

1. Current law fails to specify responsibilities and liabilities of local officials in hazardous waste management.

2. Under current law, local officials can be subjected to an array of potential liabilities because of actions taken to mitigate hazardous waste site and management threats. Recent examples include: refusal of one community to accept another community's waste because of future liabilities; and transportation mishaps involving local government vehicles carrying out clean-ups.

7. FUNDING ASSISTANCE TO LOCAL GOVERNMENTS

Resolution:

The National Association of Local Governments on Hazardous Wastes recommends that Congress amend Superfund to provide for the fair and equitable treatment of all levels of government in the provision of Superfund assistance, including local governments.

Rationale:

1. Current law only provides for grant assistance to the States.

2. Superfund requires that any waste site owned or operated by a State or political subdivision be cleaned-up with at least 50% State or local funds. Localities are at a disadvantage to generate adequate resources for such clean-ups.

3. The National Priority List only addresses a small number of hazardous waste sites, leaving local governments with the responsibility to address the 17,000 - 22,000 sites that are not currently on the National Priority List.

8. TECHNICAL ASSISTANCE

Resolution:

The National Association of Local Governments on Hazardous Wastes supports the provision of technical assistance to local communities, including grants to localities to coordinate their hazardous waste related activities with State and Federal programs, assistance in the establishment of education programs, and general assistance in times of hazardous waste site and spill emergencies.

Rationale:

1. Local officials have direct contact with affected individuals in hazardous waste emergencies.

2. Technical assistance to local government officials would facilitate understanding of Superfund capabilities and expedite clean-up measures.

9. FUNDING FOR RESEARCH AND DEVELOPMENT

Resolution:

The National Association of Local Governments on Hazardous Wastes urges the Congress to provide increased funding for innovative and alternative hazardous waste management and treatment techniques as a means to promote new hazardous waste management technologies.

Rationale:

1. Current RCRA regulations create a bias in favor of land disposal because of the low costs associated with this hazardous waste management/disposal technique.

2. The high capital costs and rigorous permitting procedures required to gain approval for innovative and alternative hazardous waste management practices make advances unlikely without strong EPA advocacy through research and development programs.

3. Failure to provide for such waste management technologies through EPA R&D programs will increase the quantities of hazardous wastes that must be land disposed posing future potential Superfund hazardous waste sites, rather than minimizing the total volume of hazardous wastes annually generated.

4. EPA R&D programs in this area of hazardous waste management would foster public confidence in new techniques minimizing future facility siting problems that occur over safety and land-use issues.

10. GROUNDWATER PROTECTION

Resolution A:

The National Association of Local Governments on Hazardous Wastes supports the development by the U.S. Environmental Protection Agency of a comprehensive strategy for the protection of groundwater. Such a policy should recognize the critical role to be played by local governments, and should place a heavy emphasis on preventive measures which can be undertaken to protect aquifers from contamination, utilizing reasonable and consistent standards. NALGOHW also supports efforts in Congress to address groundwater protection issues.

Rationale:

1. The supply of useable fresh water within one-half mile of the surface is at least twenty times greater than the total amount of surface water. Presently, groundwater supplies one-half of the nation's water needs.

2. Groundwater contamination is a growing problem, especially from hazardous wastes. Increasingly greater quantities of hazardous wastes are being generated every year, with a very high estimated percentage of these being disposed of improperly, dumped in landfills and lagoons, posing a threat to groundwaters.

3. Sources of groundwater contamination are waste disposal practices, agricultural activities, and natural processes. The types of contaminants include inorganic ions, chlorides, heavy-metal ions, and complex synthetic organic compounds.

4. Groundwater contamination is expensive to detect and monitor. Further, once present, the contaminants are very difficult or impossible to remove from aquifers, and are unlikely to change or dilute as part of any natural progression.

5. The problem of groundwater contamination is nationwide, with contamination incidents reported from every state. The specific types of contamination show a regional clustering, however, with industrial waste problems predominating in the Northeast, agriculture-related contamination in heavily agricultural states, and saltwater intrusion in metropolitan coastal areas.

Resolution B:

The National Association of Local Governments on Hazardous Wastes urges the Federal government to develop guidelines for hazardous materials and hazardous waste storage, processing and transferring which can be undertaken to protect aquifers from contamination

utilizing reasonable, prudent and consistent standards; paying particular attention to potential pollutants which are of a water soluble nature.

Rationale:

1. Many soluble chemicals are difficult, expensive and often impossible to remove from underground aquifers under current economic, political and technological conditions.

2. Preventative measures designed to reduce adverse effects of improper release of hazardous material and hazardous waste into the Eco-system are currently economically, politically and technologically possible.

3. Preventative measures designed to minimize the adverse affects against improper release of water soluble pollutants into the soils and through the soils into the ground waters are currently economically and technologically possible for achieving a goal of tolerance for acceptable risk associated with the storage, processing and transferring of hazardous waste and hazardous materials.

11. ASSISTANCE FOR TREATMENT AND STROAGE FACILITIES

Resolution:

The National Association of Local Governments on Hazardous Wastes urges Congress to provide economic assistance and incentives for construction and operation of hazardous waste treatment or storage facilities.

Rationale:

1. The improper disposal of hazardous wastes will continue to occur until such time that an economical means for small generators to dispose of hazardous waste exists.

HAZARDOUS WASTE TREATMENT COUNCIL

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TESTIMONY

RICHARD C. FORTUNA

EXECUTIVE DIRECTOR

HAZARDOUS WASTE TREATMENT COUNCIL

BEFORE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

U.S. SENATE

REGARDING

"SUPERFUND" REAUTHORIZATION

MAY 23, 1984

Mr. Chairman, Members of the Subcommittee I welcome the opportunity to appear this morning to discuss the Hazardous Waste Treatment Council's views on the reauthorization of the Superfund program.

The Treatment Council is a national association of firms with a common commitment to the primary use of technological treatment methods in the management of hazardous wastes, and to the restricted use of land disposal facilities. The Council's membership includes firms that are engaged in all forms of hazardous waste treatment and disposal including remedial site investigation and cleanup. The Council is the largest organization to represent the interest of commercial hazardous waste treatment and management firms.

INTRODUCTION

I would like to address a limited number of issues that the Council membership has identified as priority concerns in the reauthorization of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund).

There can be little question that the Superfund must be reauthorized for an additional 10 year period. As with the preventive program under the Resource Conservation and Recovery Act (RCRA), the initial years of the Superfund program have served to merely better define the nature and scope of the problem rather than to broadly implement solutions to them.

It is clear that an additional 5 years simply will not be sufficient to address the many outstanding problems and the growing discovery of additional site problems. Moreover, in many respects, the future success or failure of the Superfund from this point forward rests with the legislation to close the regulatory loopholes and restrict land disposal under RCRA. Current RCRA interim status sites already represent the primary source of future "Superfund" sites.

Unless the RCRA legislation (S. 757) is enacted this year, "legal dumping " will continue, land disposal will go largely unrestricted, and the loopholes in the present regulations will continue to create yet additional problem sites than we may ever cleanup through "Superfund." Legislation under RCRA to close the loopholes and prohibit certain forms of land disposal must preceed the "Superfund" reauthorization.

Irrespective of what estimate of the number of potential "Superfund" sites one chooses, the trend is clearly upward. The evidence from several states shows that a large percentage (approximately 40%) of the land disposal facilities with interim status have decided to close rather than undergo final permit review.

The Council's guiding philosophy in evaluating "superfund" issues complements the approach that has been advocated in the RCRA amendments; wastes should be managed properly and ultimately in the first instance thereby preventing human and environmental exposure and eliminating the need for more costly remedial actions in the future.

The only situation that could parallel the potential harm and shortsightedness of the current RCRA loopholes would be for the "Superfund" program to sanction cleanups that will need to be revisited because of the short-term nature of the solution or because the waste was taken to a facility that may itself become a "Superfund" site. This, however, is precisely the situation that the Council has identified as the most disturbing aspect of the "Superfund" program to date.

THE "BALANCING TEST" AND SHORT-TERM CONTAINMENT

The most significant shortcoming of program implementation to date is the adverse impact that the "balancing test" language of Section 104 has had on the choice of permanently protective methods of remedial site treatment and disposal.

The situation can best be described as one which results in the overdesign and evaluation of short-term cleanups; cleanups which will likely require additional future remedial action. Many "cleanups" are penny wise, but pound foolish.

The overwhelming preponderance of sites undergoing remedial action are having slurry containment walls installed and then capped. While this is frequently the lowest cost option, few view it as a permanent solution. For materials where treatment would not yield a significant decrease in either waste hazard, volume, or mobility such an approach may be appropriate. However, in a growing number of cases, the slurry wall and cap approach is being recognized as a less than adequate means of remedial response.

"CLEANUP" CASE STUDIES

While there are any number of sites throughout the country that could illustrate this problem, I believe that two site "cleanups" are particularly appropriate to this discussion.

Bell Pole & Lumber
New Brighton, Minnesota

This site is on the national priority list (NPL) due to groundwater contamination from pentachlorophenol (PCP) a common wood preservative, a waste which contains various species of dioxin contaminants.

The "cleanup" of this site originally called for the shipment of over 200 rail car loads of dioxin contaminated woodchips and soils to a scrap metal dealer near Chicago to be "recycled" at the cost of $40 per yard. A cost which represents half of what it would cost even if the wastes were placed in a landfill.

According to recent investigations, the woodchips and soils were to be "recycled" by being burned at the site and the soil was then to be sold as fill material. The scrap dealer had never even heard of PCP, and had no permits to handle hazardous wastes. Had these dioxin wastes been burned at low temperatures, they would have likely created more toxic dioxins and in greater quantities than were contained in the wastes originally, and the "fill material" would undoubtedly still have contained dioxins that would have created a new waste site at each location where the material would be used.

Administrative questions aside, and the RCRA loopholes that are illustrated by this site withstanding, it is abundantly clear from this example that current cleanups are so biased in favor of low cost approaches irrespective of their effectiveness, that permanent and more protective remedial methods are sometimes not even being considered. It is ironic that one of the few permitted PCB incinerators is located right in the City of Chicago (operated by SCA Chemical Services). However, neither they nor other firms with either the capability to properly treat these wastes at the site were approached regarding this site.

Landfill Site
Northeast, U.S.

The initial remedial action at this site called for the construction of a slurry containment wall at a cost of $3.0 milllion. As a result of further site analysis, it has now been determined that a more cost-effective approach would be to install an on-site system to treat, rather than contain

the wastes, at a cost of an additional $4.0 million. Therefore, a decision to treat rather than merely contain would initially have cost an additional million, but in the end would have saved approximately three million.

The Council has several recommendations to redress this concern and promote the primary use of permanent methods of treatment and disposal during remedial site actions:

* include in the statute an explicit policy statement similar to that which is contained in the RCRA amendments, which holds that it is the policy of Superfund to permanently render wastes non-hazardous at the time or initial remedial action;

* amend the "balancing test" language of Section 104 to reflect this policy and to explicitly require that the cost-effectiveness evaluations conducted under this Section reflect long-term rather than merely short-term cost considerations. The Council believes that these two changes will insure that the effectiveness of a given option is more valued than simply its cost, and that cost-effectiveness decisions are based upon a more acceptable minimum level of public health protection over the long-term;

* include criteria specifying that treatment is the preferred option where it will yield a significant and permanent decrease in either waste volume, hazard, or mobility. For example, much of the contaminated soil that is generated at Superfund sites would still likely be land disposed due to the presence of wastes in low concentrations and the need to ultimately land dispose the residues of such treatment. However, where the concentrations of waste materials were considered to be significant or where the soils contained materials that exhibit high mobility in the environment, then it would be expected that such soils would be treated prior to land disposal;

* for the purpose of insuring that the government's low bidder policy does not serve as an impediment to quality work at Superfund sites, the Agency should be required to develop pre-qualification review procedures for Superfund contractors, and to bolster the bid specifications on Requests For Proposals (RFPs) to provide for greater Agency follow-up on the manner and sites at which disposal and waste management will occur.

One of the other manifestations of the balancing test problem is witnessed in the trend toward employing non-cleanup options and approaches with high initial capital costs and low operation and maintenence (O/M) costs at "Superfund" remedial sites. This is due to the fact that states are currently not permitted to apply the costs of long-term operation and maintainence toward their 10% matching share.

Thus in a desire to limit their share of the costs the uncertainty of site cleanup budgeting, the states have been indirectly coerced into the selection of containment options, which entail high initial capital costs with limited long-term operation and maintainence. As such, the cost sharing provisions should be amended to allow for the states to include long-term operation and maintenence costs in their 10% site cost-sharing formula.

The "balancing test" issue is fundamental in both nature and choice: the Superfund can either be used to temporarily contain many sites at a lower short-term cost or be used to permanently remove site hazards from posing future threats to health and the environment at a higher short-term cost. It is a most difficult issue, but perhaps the most critical one on which the Congress must act.

HOW CLEAN IS CLEAN

There is an interminable debate about the levels of cleanup that should be required at Superfund response sites. While it is clear that the diverse and dynamic nature of remedial response actions requires the delegation of substantial latitude to the Agency and in turn to the site manager, there is the need to establish a recognized starting point for such determinations.

The Subcommittee may want to examine the utility of establishing a system of rebuttable presumptions against existing standards as the starting point for the evaluation of appropriate levels of cleanup at Superfund sites. It would be necessary to provide guidance in situations where more than one standard could be applied, and to establish criteria which would have to be met in order to overcome the presumption in favor of existing standards.

POST-CLOSURE LIABILITY TRUST FUND

The Post-Closure Liability Trust Fund (PCLTF), which began collecting fees on land disposed wastes last month, was a last minute addition to Superfund, yet has substantial adverse implications for the maintenence of proper incentives and operation at present and future RCRA sites. As currently drafted, the provision allows a land disposal facility owner/operator, which has received a final RCRA Subtitle C permit and who subsequently closes the facility, to transfer all site liability (except for monitoring and maintenence) to the PCLTF not later than five years after closure of the facility. The transfer of liability is contingent upon a demonstration that there is no substantial likelihood of offsite migration or release of any hazardous substances.

The Council believes that this provision is seriously flawed in both structure and concept. While some questions of coverage for bankruptcies are raised in the absence of such a fund, far more and serious questions are raised relative to the nature of the incentives for protective site management under the current provision.

The policy of this fund must make it abundantly clear that it is intended to cover exceptions rather than to be a standard expectation by which land disposal facilities relieve themselves of liability. The fund must also be structured to insure adequate funding and to encourage the restricted use of the best methods of land disposal rather than those which will merely suffice for purposes of liability transfer.

The more rapid the liability transfer to the PCLTF, the more attractive land disposal will become. If the transfer of private site liablity to the federally-backed PCLTF is accelerated as has been advocated by some groups, the incentives for proper treatment will be further undermined, since treatment facilities detoxify or destroy wastes at the time of generation, and as such do not retain the post-closure liabilities of a land disposal facility.

In light of the possibility of revenue shortfalls in the PCLTF, and given the potential disincentives for advancing the state-of-the-art of land disposal in the event of unbridled liability transfer, the Council believes that the PCLTF should at a minimum be revised by extending the time in which the facility owner/operator would retain liability prior to fund transfer.

In addition to the direct disincentives to protective disposal and treatment methods that could be created by such a subsidy, there are several other issues raised by the existence of the PCLTF in its current form:

* the fund is currently limited to a maximum of $200 million. In light of the facts that the liabilities are potentially unlimited and that the fund could begin to assume liability for closed facilities in less than five years, it is highly questionalbe that $200 million would or will cover the liabilities of such a fund. Even though the funds for the PCLTF come from fees on disposal, it is the federal government that actually assumes the liability for the sites and the responsibility for the fund in the event of unforeseen problems;

* in the event that more claims were made on the fund than it could handle, and given that the facility owner would be shielded from liability, who or what would be available to provide relief to a third party? The Superfund itself is not currently available to cover such a contingency. Under these circumstances it appears that

either due process is denied to a person seeking remedial relief, or they would be forced to seek relief from the generators that used the site, as they are not shielded from liability;

* while much of the original justification for the fund focused on the need to cover potential bankruptcies subsequent to closure, any facility which meets the current criteria, bankrupt or not, can qualify for liability transfer;

* many of the surface impoundments that are currently being used for storage could be changed to disposal impoundments at closure. A storage impoundment would not have collected post-closure fees because the wastes were not supposed to remain there at closure, but would it then be eligible for the PCLTF?;

* Class I hazardous waste injection wells (deep wells) are not required to carry the third party liability coverage that is a part of interim status for other RCRA facilities. It is unclear at this point whether such facilities are required to pay into the PCLTF, and moreover, whether they could become the responsiblity of the PCLTF. In light of the large volumes of wastes that are injected into deep wells each year, one claim by such a facility could dramatically alter the projected composition and operation of the fund;

* the collection of fees on the basis of dry weight ton is confusing and is contributing to a likely undercollection of PCLTF fees. Most firms are simply collecting such fees on the basis on net rather than dry weight which represents a simpler and more reliable method of collecting fees and monitoring payments into the PCLTF.

JOINT AND SEVERAL LIABILITY

While the issue of joint and several liablity has been and will remain controversial, several Council Members have noted that the use of this approach in the Chem-Dyne case and its subsequent judicial affirmation have served the interests of expedited site cleanup and have prompted several responsible parties to undertake accelerated cleanup of their portion of the waste site. It is the expectation of these Members that the use of administrative orders under Section 106(a) will have a similar beneficial effect.

WASTE-END FEE SYSTEM

The Council has conducted an independent analysis of the waste-based fee system issue, which examined various Superfund fee system options including waste and feedstock fee systems (see attachment).* The Council's study examined six different criteria by which the relative merits of a waste-end fee system could be evaluated: revenue potential, administrative feasibility, impact on other federal/state programs, economic impacts, environmental impacts, and equity implications.

The significance one attaches to each of these criteria will determine which method of funding one views as most favorable. In the view of the Treatment Council the most important evaluation criteria are revenue potential, impact on other state and federal programs, and environmental impacts.

In examining the performance of these criteria in various state feedstock and waste-end fee systems, the Council has drawn the following findings:

* state programs have provided little if any assurance that waste-end fee systems will be even remotely as reliable in raising revenue as the current feedstock tax. A recent GAO investigation of this question (May 4, 1984) reached the same conclusion;

* a federal waste-end fee would inevitably create pressure on the states to repeal their waste-end fee systems, which have been a leading method of raising the revenue needed to satisfy the 10% cost sharing requirement;

* the purported environmental benefits of a waste-end fee system (i.e. volume reduction, decreased land disposal, increased treatment) have yet to be demonstrated.

A fundamental problem of all waste-end proposals, is the uncomfortable mix of objectives which puts at odds the desire to fund the program with the desire to restrict land disposal. With the highest fee being placed on land disposal, the incentive could be to continue the land disposal of certain wastes that might otherwise be restricted in order to maintain expected program operating levels.

In addition, the very basis of any waste-based fee system---the definition of solid and hazardous waste---has undergone several proposed revisions that would define a broad range of on-site hazardous waste management as non-hazardous waste management, and as such could not be taxed as a hazardous waste for purpose of such a fee system. These proposed changes, if issued in final form, would have to be taken into account for the purpose of any Superfund waste-based fee system.

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*The attachment referred to has been retained in committee files.

At this juncture, the equity and environmental promise of any waste-based proposal must be tempered by considerations of reliability and potential conflict with other environmental objectives.

With regard to the funding mechanism for CERCLA the Treatment Council recommends:

* reject the use of a waste-end fee system as a substitute for feedstock fees;

* expand the current feedstock fee system to include many of the feedstocks that are excluded from fee collection, but which are the cause of groundwater contamination at "Superfund" sites. The Treatment Council has included a copy of its supplemental study on this aspect of the funding issue dated February 27, 1984 for this purpose;

* consider expanding the appropriations share from the current 12.5% to 20-25% of the fund.

Should the Committee find it necessary to include some form of waste-end fee system for purposes of expanding the revenue base, the provision should not impose fees on wastes that undergo treatement, nor should fees be assessed on all of the various waste management activities that it may undergo. Only if a waste-end fee is kept simple by assessing it on the volume of waste generated, is their any reasonable liklihood of reliably expanding the revenue base, and instituting positive environmental incentives for waste reduction.

VICTIMS COMPENSATION

While the Council has not adopted a formal position on this issue, it is my view that a provision such the one that is contained in the recently introduced House bill (H.R. 5640), would meet with the approval of the membership. The policy of this provision is similar those contained in the RCRA reauthorizations, which allow citizens to initiate their own imminent hazard suits in federal court. A provision which the Council suppports.

STATEMENT OF JEROME J. McGRATH, PRESIDENT

INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

MAY 23, 1984

Mr. Chairman and Members of the Committee:

I am Jerome J. McGrath, President of the Interstate Natural Gas Association of America (INGAA). I appear before you today to express our views on the proposed reauthorization and amendment of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund).

INGAA is a national non-profit trade association representing the interstate natural gas transmission industry. Our member companies own and operate more than 200,000 miles of pipeline through which flow approximately 90 percent of the natural gas transported and sold annually in interstate commerce.

Our reason for appearing before the Committee today is to urge reauthorization of the Superfund Act, retaining the current treatment of natural gas, which we believe is consistent with the overall goals of the Act; and to discuss the underground storage tank programs which some have proposed incorporating into the Superfund law.

Current Law

When Congress, and more specifically this Committee, was drafting the Superfund proposals in 1980, there was an understandable desire to define the term "hazardous substance" as broadly as possible. The definition includes substances designated as hazardous pursuant to Section 102(a) of the Act, which reads:

SEC. 102.(a) The Administrator shall promulgate and revise as may be appropriate, regulations designating as hazardous substances, in addition to those referred to in section 101(14) of this title, such elements, compounds, mixtures, solutions, and substances which, when released into the environment may present substantial danger to the public health or welfare or the environment, and shall promulgate regulations establishing that quantity of any hazardous substance the release of which shall be reported pursuant to section 103 of this title. The Administrator may determine that one single quantity shall be the reportable quantity for any hazardous substance, regardless of the medium into which the hazardous substance is released. (Emphasis supplied.)

The broad reach of this mandate led to concern that natural gas could istakenly be classified a "hazardous substance," not because it poses any nvironmental threat, but because natural gas is flammable, and as such may ose a safety threat when accidentally released. To avoid any possible confusion or misinterpretation, specific language was placed in the definition of hazardous substance, excluding natural gas from the Act's coverage. The law now states that the term "hazardous substance....does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas);". I would note that while the exemption for natural gas is part of a sentence containing an exemption for oil, there is really no connection between the two. I would also note that a corresponding exemption for natural gas was inserted in the definition of "pollutant or contaminant" (Sec. 104 of the Act).

The reasons for continuing the natural gas exclusion in any Superfund reauthorization are as compelling now as the reasons for the inclusion of the original exemption.

1. Natural gas is not a pollutant.

The purpose of the Superfund legislation is to protect the public against exposure to toxic chemicals and contamination of the environment. Natural gas, even if accidentally released, does not pose this type of threat. Methane, the principal component of natural gas, is nontoxic, is not an

irritant, and does not react with other chemicals to form toxic or harmful chemicals.

2. Natural gas is not now defined as a "hazardous substance."

INGAA knows of no statute or regulation that now designates natural gas a hazardous substance, including the various Acts cited in the Superfund law. As I stated above, however, absent the exemption of natural gas, the Act would result in such classification, because of the requirement that EPA classify as hazardous those substances that pose a danger to public health when released. Natural gas would be covered by this language, not because it pollutes or contaminates, but because it is flammable and may, under certain circumstances, ignite when accidentally released.

3. An effective statutory and regulatory framework already exists to insure safe operation of pipeline systems.

Historically the natural gas industry has maintained an exemplary safety record (Attachment A). In addition, the Natural Gas Pipeline Safety Act of 1968 established a system of uniform standards and requirements applicable to pipeline transportation of natural gas. The original Act, which has subsequently been amended, governs directly or indirectly virtually every phase of natural gas transportation and distribution. The Act is now in the process of being reauthorized again this year; indeed, the House and Senate Committees of jurisdiction have reported reauthorization bills.

The Natural Gas Pipeline Safety Act grants broad authority to the Department of Transportation to protect the public against unsafe transportation of natural gas and extensive regulations have been adopted pursuant to that authorization (see 49 Code of Federal Regulations, Parts 191 & 192). This authority would directly overlap and conflict with the

responsibility given the EPA should natural gas be brought within the scope of Superfund.

4. Pipeline companies maintain levels of insurance that cover damages caused when accidents do occur.

Although the pipeline industry has achieved an outstanding safety record, some accidents do occur. When accidents have occurred existing insurance liability arrangements with private insurance carriers have, to the best of our knowledge, proven to be completely adequate.

In summary, natural gas is not a pollutant and because a substantial regulatory framework governing natural gas pipeline safety is already in place, inclusion of natural gas within a broad superfund scheme relating to hazardous wastes and toxic substances would be unjustified and unnecessary.

We are aware of no incident that has occurred that would cause any question to be raised concerning the legitimacy of the existing language. For all these reasons, the exclusionary language now contained in the Superfund definitions of "hazardous substance" and "pollutant or contaminant" should be retained.

Similarly, the revenue provisions of the current law make clear that methane is only to be subject to the chemical tax when used otherwise than as a fuel. This provision makes clear that because the use of natural gas as a fuel is not related to any environmental threat, such uses should not be taxed. In keeping with the purpose of the taxing structure, methane is taxed when used otherwise than as a fuel, that is, for feedstock purposes.

Underground Storage Tank Proposals

INGAA would also like to comment on the proposals to establish an underground storage tank program as a part of the Superfund. Superfund legislation being considered in the House contains such a provision and I understand that this issue may be considered by this Committee as well.

INGAA does not oppose proposals to regulate underground storage tanks containing substances which, when released, may contaminate ground water supplies or otherwise do serious damage to the environment. We do believe, however, that such legislation must be carefully drawn to accomplish this objective.

First, INGAA believes that any underground storage tank regulatory program would best be placed in the Safe Drinking Water Act, as suggested by Sen. Durenberger (S. 2513), rather than the Superfund. The Safe Drinking Water Act is designed to protect sources of drinking water whereas the Superfund is designed principally as a device to clean up releases of hazardous substances that have caused substantial environmental damages. The overwhelming majority of underground tanks would, we suspect, never pose the pollution threat which Superfund is aimed at covering. To the extent that leaks from such tanks do occur, we believe that most problems can be addressed without resorting to Superfund authority. If an underground storage tank program is to be contained within the Superfund Law, however, it should be constructed as a separate title, independent of the existing Superfund requirements.

At this point, I wish to emphasize that the interstate pipelines have no quarrel with a reasonable underground storage tank program, regardless of which statute is amended. While compliance with the program would certainly impose some additional burdens on our members, the pipeline companies have competent, experienced engineers and operational personnel whose job it is to maintain the safe and efficient operation of the pipeline system.

We are deeply concerned, however, that substances which do not pose a threat of groundwater or other contamination might inappropriately become subject to this regulation. For example, some proposals reflect a desire to include tanks which are used for storing hydrocarbon liquids which are removed from natural gas. In fact, among the hydrocarbon substances broadly identified

as natural gas liquids are substances which are gaseous at atmospheric temperature and pressure. Commonly, the holding tanks for such hydrocarbons may contain both liquids that vaporize into the atmosphere if released and those that remain as liquids when released. Those "liquids" removed from natural gas which are in fact gaseous under standard conditions need not and should not be included within the scope of the legislation.

Thus, INGAA believes that legislation regulating underground storage tanks should define as hazardous only those hydrocarbons which are in fact liquid at standard conditions of temperature and pressure (60oF and 14.7 PSIA).

Another source of concern is that some proposals define the term "underground storage tank" so broadly as to include natural gas pipeline facilities or, more specifically, those parts of pipelines where liquid condensate is collected. These so-called "drip collectors" are small collection vessels that are a physical part of the pipeline and thus are regulated pursuant to the Natural Gas Pipeline Safety Act. Inclusion of these facilities within the scope of the "underground storage tank" definition would create the same regulatory conflicts and overlap as would inclusion of natural gas within the Superfund.

Furthermore, if a break in a pipeline were to occur, condensates in such vessels would be vaporized into the atmosphere along with the natural gas, posing no pollution threat. Thus, we have urged that the definition of "underground storage tanks" specifically exclude pipeline facilities regulated pursuant to the Natural Gas Pipeline Safety Act.

In conclusion, INGAA believes that when the Superfund reauthorization moves forward, the provisions affecting natural gas should remain as in current law. Further, if an underground storage tank program is adopted, it should exempt pipeline facilities already regulated under the Natural Gas

Pipeline Safety Act and it should clearly limit the scope of the program to only those substances which pose an actual environmental threat. INGAA appreciates the opportunity to present our views on these issues before the Committee and we will be pleased to respond to any questions the Committee may have.

Attachment A

National Transportation Safety Board

Washington, D.C. 2059[illegible]

Safety Information

FOR RELEASE: 6:30 p.m. Sunday, May 15, 1983 SB 83-22

HIGHWAY, TRANSPORTATION FATALITY TOTALS DROP TO TWO-DECADE LOWS IN 1982

Fatalities on United States highways and in all of U.S. transportation dropped in 1982 to the lowest levels in two decades, according to preliminary statistics released today by the National Transportation Safety Board.

The highway death toll of 43,990 was a reduction of almost 11 percent from the 49,301 highway fatalities in 1981. With highway fatalities historically accounting for more than 90 percent of all transportation deaths, the transportation total last year — 48,040 — similarly was down sharply, by 10.2 percent, from 1981.

It was the second successive year of significant highway and transportation fatality reductions. The highway death toll has not been below 44,000 since 1963, when it was 41,723.

Safety Board Chairman Jim Burnett, releasing the statistics for the May 15 opening of Transportation Week, commented:

"We've saved more than 5,000 lives during the year, but not because we've solved our over-riding highway safety problems. The drunken driver still is involved in roughly half of all fatal accidents, and thousands of more lives could have been saved if seat and shoulder belts and child safety seats were being used by most drivers and occupants.

"The reasons for the lower fatalities in 1982 may be economic. With recovery under way, continuing this two-year downward trend will be possible only with significant progress in all of our highway safety efforts."

Of all the transportation modes, only two — aviation and pipelines — registered fatality increases in 1982. The airline toll soared from 4 to 235, largely in two accidents; commuter plane fatalities dropped sharply, from 36 to 13; on-demand air taxi fatalities were down from 92 to 75; general aviation was down from 1,288 to 1,164. Pipeline fatalities rose from 18 to 31.

The 16.6 percent decrease in rail-highway grade-crossing fatalities — from 728 in 1981 to 607 in 1982 — marked the fourth successive year of decline from a 1978 toll of 1,064. Government and industry have been cooperating to install crossing warnings and increase enforcement efforts, and "Operation Lifesaver," a state-level effort, seeks to increase public awareness of grade crossing hazards.

"This entire safety program clearly is working," Chairman Burnett said. "We must achieve this kind of success with other major highway safety programs."

The preliminary 1982 transportation statistics are detailed in this table and the attached pie chart:

Highway *			
	Passenger Cars	26,645	23,184
	Pedestrians	7,837	7,235
	Pickup Trucks and Vans	6,137	6,385
	Large Trucks	1,206	990
	Motorcycles	4,906	4,310
	Pedalcycles	936	800
	All Other	1,634	1,086
	Total	49,301	43,990
Grade Crossings		728	607
Railroad			
	Intercity: Passengers	4	9
	Employees on Duty	64	74
	Pedestrians and Others	492	429
	Rail Rapid Transit: Passengers	10	8
	Employees on Duty	4	1
	Pedestrians and Others	89	75
	Total	663	595
Marine			
	Commercial	164	158
	Recreational	1,208	1,171
	Total	1,372	1,329
Aviation			
	Airlines	4	235
	Commuter and Air Taxi	128	88
	General Aviation	1,288	1,164
	Total	1,420	1,487
Pipeline			
	Gas	13	31
	Liquids	5	0
	Total	18	31
GRAND TOTALS		53,502	48,040

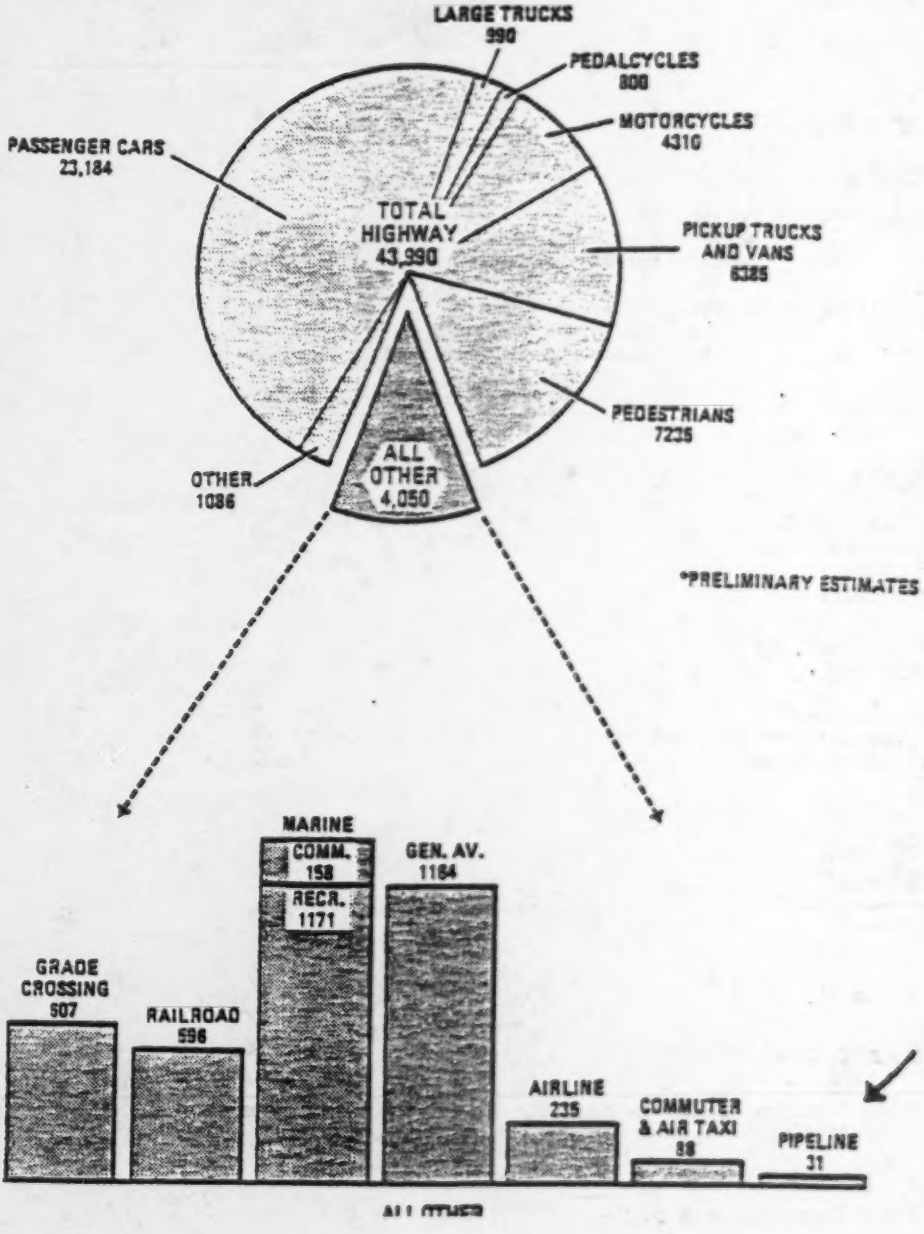
* All fatality totals include only drivers or other occupants of that type of vehicle or vessel.

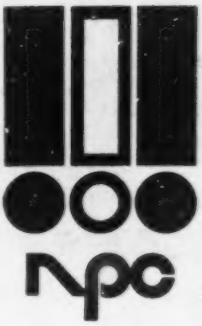
-oOo-

Press Contact: Brad Dunbar

NATIONAL TRANSPORTATION SAFETY BOARD
Washington, D.C. 20594

TRANSPORTATION FATALITIES*
48,040 IN 1982





STATEMENT

OF

MR. LARRY L. THOMAS

EXECUTIVE DIRECTOR

THE NATIONAL PAINT & COATINGS ASSOCIATION

BEFORE

THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

SUPERFUND REAUTHORIZATION

MAY 23, 1984

WASHINGTON, D.C.

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Mr. Chairman, I am Larry Thomas, Executive Director of the National Paint and Coatings Association (NPCA). We represent over 800 companies which account for 90% of the production of consumer paints and industrial coatings in the U.S. While this includes some of the largest paint manufacturers in the world, many of our members are small or middle-sized concerns. Over 100 of these companies are already involved in site cleanup actions and the consistent response of the paint and coatings industry has been to work for expeditious and equitable voluntary site cleanup--so I intend to focus on the concern we have about EPA's current enforcement policies.

With me today is Mr. Thomas Graves, NPCA's Assistant General Counsel, and Mr. Timothy Harker, a partner with the law firm of Kadison, Pfaelzer, Woodard, Quinn & Rossi. Both have practical, on-hands knowledge concerning Superfund enforcement and are prepared to address any questions you may have regarding that process and the implications of legislative amendments to the Law.

First let me assure you that we support a Fund which will provide what EPA needs to conduct an effective and efficient cleanup program. Four years ago, then President of NPCA, Mr. Robert Cox, President of The Gilbert Spruance Company in Philadelphia, testified before you in support of a broad-based tax which will obtain revenues for the Fund from all segments of industries which generate waste. This remains our position. Legislative

reauthorization of Superfund is obviously very complex, raising many questions associated with its size, scope, and technical provisions.

On May 16, 1984, I testified before the Subcommittee on Water Resources of the House Public Works and Transportation Committee concerning the recently introduced Superfund reauthorization bill, H.R. 5640, by Congressman James Florio.

I concentrated on the liability standard which substantially impacts upon the effectiveness of the Superfund program. Today, I intend to again raise questions about Section 115 of H.R. 5640 which would amend the liability standard under Section 107 of the current law. I believe my remarks are pertinent to the deliberations on the matter before your Committee. The amendment would require the imposition of joint and several liability as construed by the courts in their application of Section 311 of the Clean Water Act to spill cases.

If we were to assume that the Superfund always will be inadequate and must be replenished by extraordinary enforcement, then holding one or several companies liable for total cleanup costs, regardless of their actual contributions to the site, might be justified.

But, of course, this should not be the case since one of the prime objectives of this reauthorization is to make sure that the Fund is adequate for cleanup.

If all the generators of waste who contributed to these sites over the years were engaged in unlawful activity or gross

misconduct then again perhaps there would be some moral justification to proceed on the basis of joint and several liability.

But these companies, for the most part, disposed of their wastes in a legal, acceptable manner for the time.

To impose rigid joint and several liability against them is unfair, since many are already paying the tax for cleanup in the first place. But the government is enforcing Superfund right now as though joint and several were in the law.

In addition to its basic unfairness, government delay in site cleanup and economic waste are fostered by the current emphasis on joint and several liability by EPA and the U.S. Department of Justice. The present type of limited, less than genuine, negotiation followed by complex litigation against only certain companies, for all cleanup costs, is counterproductive. It is costing everyone, including EPA, substantial time and money, and producing very little toward actual cleanup.

Let me just give you one specific example: Some 130 companies have been identified as hazardous waste generators at two related waste sites in the midwest. Twelve are paint manufacturers.

One site has been cleaned up, the other has not. The Justice Department, representing EPA, has taken the position that any generator identified at either or both sites is responsible for the cleanup of both sites.

An industry group representing 65% of the generators, including paint companies, offered to clean up Site 2, reimburse EPA for one-half the cost of Site 1 cleanup and take additional actions

which would have represented over 85% of the entire surface cleanup, subsurface investigation and remedial study costs, for both sites. The Justice Department, on behalf of EPA, rejected the offer this January and sued nine of the 130 generators for the cleanup costs, even though the government has quantified all the alleged parties' wastes.

The liability provisions in Superfund should be amended to ensure that cleanup rather than enforcement receives the top priority, and to avoid the wasteful transaction costs and the unfairness of such an inflexible joint and several liability approach. If a continuing, adequate fund is established, an equitable enforcement approach certainly will not impede cleanup since the Fund will continue to be replenished by the broad-based tax and will not need to be replenished by extraordinary enforcement actions.

The Superfund liability standard should be modified to permit generators who legally disposed of their wastes to pay their fair share towards cleanup, and only their fair share. H.R. 5640, by compelling joint and several liability, would instead institutionalize the current inequities in Superfund enforcement.

Mr. Chairman, in 1979 the House of Representatives endorsed a sensible, fair limitation on the imposition of joint and several liability. The language (Section 3071 in H.R. 7020, as passed by the Committee on Interstate and Foreign Commerce on May 13, 1980), would have limited the liability of a generator to his

fair share if he could demonstrate his fair share by a preponderance of the evidence according to statutory criteria for apportionment.

The House Interstate and Foreign Commerce Committee explained the reasoning behind this common sense approach and I quote: "It is the intent of the Committee in establishing the apportionment scheme to induce persons to come forward with as much information as possible with respect to hazardous waste." In 1980, your Senate committee bill, S. 1480, on the other hand, would have specified joint and several liability. Eventually, however, all explicit references to joint and several liability were removed from the final Senate-passed version. The compromise measure which became law defined "liability" as the "standard which obtains under Section 311 of the Federal Water Pollution Control Act."

Now, in H.R. 5640, the House would explicitly state that the standard of liability shall be strict, joint, and several as construed and applied under Section 311 of the Federal Water Pollution Control Act. We believe this is an approach which is unsuitable to Superfund situations and which flys in the face of recent federal case law on the subject.

Section 311 of the Clean Water Act has been interpreted by some courts to require joint and several liability. Section 311 cases, though, generally are far less convoluted factually and normally involve two or three parties. Superfund cases typically involve dozens and sometimes hundreds of parties. Also, Clean Water Act spills into navigable waters often pose

a truly indivisible problem whereas drums and other waste situated at a problem hazardous waste site lend themselves more readily to apportioned responsibility.

Courts have recognized that the type of imposition of joint and several liability which has been allowed in the context of Section 311 of the Clean Water Act may not be appropriate to Superfund situations.

On October 11, 1980, for example, the U.S. District Court for the Southern District of Ohio in U.S. v. Chem-Dyne interpreted the present Superfund law in this manner, and I quote:

"A reading of the entire legislative history in context reveals that the scope of liability and term joint and several liability were deleted to avoid a mandatory legislative standard applicable in all situations which might produce inequitable results in some cases. . . . The deletion was not intended as a rejection of joint and several liability. . . . Rather, the term was omitted in order to have the scope of liability determined under common law principles, where a court performing a case by case evaluation of the complex factual scenarios associated with multiple-generator waste sites will assess the propriety of applying joint and several liability on an individual basis."

For the content of its federal rule, the court looked to the liability standards of Section 311 of the Clean Water Act, but stated:

". . . While the complementary policies and comparable language of FWPCA and CERCLA are persuasive points, a blanket

adoption of the joint and several liability standard of (§311) would be inconsistent with the legislative history of CERCLA." Fleshing out its rule, the court continued:

"Typically, there will be numerous hazardous substance generators or transporters who have disposed of wastes at a particular site. The term joint and several liability was deleted from the express language of the statute in order to avoid its universal application to inappropriate circumstances."

Another precedent case, U.S. v. A & F Materials Co., Inc., rendered January 20, 1984, agreed with the reasoning of the Chem-Dyne decision; after reviewing the legislative history, the court pointed out, and I quote, "both Houses of Congress were concerned about the issue of fairness, and joint and several liability is extremely harsh and unfair if it is imposed on a defendant who contributed only a small amount of waste to a site."

The court found that the House intended a "moderate approach to joint and several liability," that had been embodied in an amendment offered by Representative Gore (D-Tenn.) to the House version of Superfund. This amendment would have empowered a court to impose joint and several liability whenever a defendant could not prove his contribution to an injury; however, a court could still apportion damages in this situation according to the following criteria:

(i) the ability of the parties to demonstrate that their contribution to a discharge release or disposal of a hazardous

waste can be distinguished;

(ii) the amount of the hazardous waste involved;

(iii) the degree of toxicity of the hazardous waste involved;

(iv) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;

(v) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and

(vi) the degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to the public or the environment.

We recommend a return to the equitable apportionment approach to allow EPA and subsequently the courts suitable flexibility and guidance in imposing joint and several liability appropriately. Any liability provision which explicitly calls for a joint and several standard should be modified to allow a contributor to prove his fair share contribution by a preponderance of the evidence, and be held accountable to the limit of that amount.

In fact, H.R. 5640 embraces the concept of fair share apportionment under Subtitle A of Section II, which establishes a federal cause of action for those harmed by a release from a hazardous waste facility. While specifying the standard of liability as strict, joint and several, "if any defendant establishes by a preponderance of the evidence that the harm is divisible, he shall be liable only for his portion of such harm."

This concept is as important in the context of liability for cleanup as in the personal injury situation. In fact, it may be easier to establish apportionment for cleanup than for injury in many instances.

As courts have wrestled with interpreting the present law, it is evident that merely tying Superfund's liability standard totally to Section 311 of the Clean Water Act is insufficient to guarantee flexibility and equity. I question whether Congress truly intends the same form of joint and several liability of Section 311 to apply to the more complicated situations arising out of Superfund, where hundreds of responsible parties are often named and the contributions can be calculated by volume, toxicity, and other criteria.

Common law nuisance cases have traditionally permitted apportionment of liability based on quantity, percentage or degree. Thus, defendants who independently pollute are liable only severally for the damages individually caused. Indeed, the burden of proof as to apportionment shifts to the defendant only when he has been shown to be negligent. Traditionally, the imposition of joint and several liability has only been allowed where two or more tortfeasors (wrongdoers) have acted in concert or have combined to produce a single, indivisible result.

H.R. 5640 would disrupt these common law tort notions; it would impose joint and several liability without regard to wrongdoing or the fact that the contribution to the harm can

criteria along the lines of the 1979 Gore amendment should be provided as an explicit statement of legislative intent with respect to the imposition of joint and several.

Our call for a legislative amendment is designed to clarify serious ambiguity in the current law which is producing inequitable enforcement and impeding cleanup. It would also codify existing federal case law and thus assist the EPA and the courts in deciding appropriate individual liability in the many Superfund cases which will be brought over the course of the next several years. Finally, it corresponds with the liability approach in Section II of the bill for personal damages.

It should be made plain to responsible companies that if they come forward on a voluntary basis they can expect genuine negotiations with EPA and be held liable for only their fair share of the cleanup costs. Then Congress will have fostered a constructive, cooperative effort between business and government to get this important job done.

Mr. Chairman and members of the Committee, on behalf of the National Paint and Coatings Association, thank you for the opportunity to comment on this important piece of legislation. I hope our thoughts are helpful. I have taken the opportunity to submit for your record along with our written statement a more comprehensive addendum prepared by NPCA which traces some of the case law in this area, and suggests a legislative amendment.

be rationally divided. The liability language in H.R. 5640 clarifies nothing -- it merely codifies the existing rigid EPA enforcement policy which delays cleanup, depletes administrative resources, and produces inequitable judgments.

NPCA believes that strict, joint and several authority should be provided to EPA as a lever or stick to be used only against wrongdoers or in those situations where liability is truly indivisible. Joint and several liability is a concept fashioned to guarantee that a wrongdoer should not be rewarded because the case is complicated. Conversely, we believe a person who did not engage in any unlawful activity should not be penalized because the case is complicated. The common law's notions of fairness and equity should therefore be preserved in the reauthorization of Superfund.

We endorse stating explicitly that liability in Section 107 of the current law shall be strict, joint and several as construed by the courts, unless a responsible party can demonstrate by the preponderance of the evidence a reasonable basis for apportionment.

NPCA's suggested liability approach would thereby empower the EPA to impose joint and several liability where the harm is indivisible or against recalcitrant parties, but those who can carry the burden of proof would pay only their equitable contribution.

In order to guide EPA and if necessary the Courts suitable flexibility and guidance in deciding fair apportionment, legislative

ADDENDUM

A Call to Amend the Liability Language in The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA or Superfund): The Practical Alternative and its Legal Justification

by the

National Paint and Coatings Association

I. Statement of the Inequity and Vagueness in the Liability Language (Section 107 of CERCLA):

A. EPA's Inequitable Enforcement Policy

In 1982, EPA was willing to accept a settlement offer from any generator willing to pay his "fair share" of the cleanup cost. A generator with 20 percent of the waste at the site, for example, could obtain a release from liability in turn for an agreement to pay 20 percent of the total clean-up cost. Today EPA takes the position that such a "cash-out" is unacceptable. A generator can no longer individually pay EPA his percentage share of any portion of or even the total cleanup and obtain a proportionate or total release from liability. As a starting point for negotiations, an offer by one or more of less than 80 percent of the purported cost of cleanup will be rejected. In the near future, at least, in any settlement negotiations, EPA will leave it to the generators to decide among themselves who has what share of the liability once the 80 percent threshold has been crossed.

Rather than ascribing percentage shares of liability to each generator, EPA relies on the imposition of an inflexible joint and several liability scheme. EPA believes current law requires the imposition of joint and several liability in all instances because it states "any person who (was an owner or operator, generator, or transporter) shall be liable for all costs of removal or remedial action." (42 U.S.C.§9607(a) (emphasis added)).

The predictable consequences of these enforcement policies are: (1) it may be impossible for an individual generator with a minor percentage of the waste to negotiate a settlement; (2) negotiated resolution even on a collective basis prior to litigation will be difficult and costly; and (3) since internal agreement as to who has what percentage of the liability will have to precede any group settlements, generators will, understandably, need more time, not less, in which to evaluate voluntary clean-up options. This need, of course, runs counter to EPA's necessity to accelerate the negotiation process. Without negotiation flexibility, EPA will be forced in the near future to resort to litigation in many of its Superfund enforcement actions, which will oftentimes thwart expedited voluntary clean-up and deplete administrative resources.

B. Section 107's Damaging Vagueness

The vagueness of current law has handicapped the Agency's policymaking. The current law is "ambiguous with regard to the scope of liability" according to the decision in U.S. v. Chem-Dyne Corp. (572 F. Supp. 802 (S.D. Ohio, 1983).

According to another U.S. District Court, its language "bears the earmarks of hasty drafting and last-minute political compromise, and in its legislative history, which one District Court has described as 'riddled by self-serving and contradictory statements.'" (U.S. v. Stringfellow (U.S. District Court, C. D. Ca., No. CV-83-2501-MML) referring to U.S. v. Wade, 577 F. Supp. 1326 (E.D. Pa., 1983)).

The U.S. District Court in Stringfellow rejected the government's argument that the statutory terms require the imposition of joint and several liability because the legislative history points "unmistakably in the opposite direction." In reviewing the legislative history, the Court concluded that "reading Section 107(a) as explicitly imposing joint and several liability would fly in the face of the understanding of key legislators in both houses." (Stringfellow, p. 6.).

These precedent-setting decisions have acknowledged that the statutory ambiguity has presented them with "an apparently inevitable dispute over CERCLA's meaning." (Stringfellow, p. 4.) After wrestling with the statutory language and the legislative history, the Courts thus far have read in the authority to impose joint and several liability even though it is not expressly granted, but have ruled that the Congress intended

that CERCLA provide flexibility so as to avoid the inequitable results which EPA's rigid policy would effect.

To clarify and correct the problems inherent with the liability language in the current law, and to implement the guidance of the initial case law in the area, Congress should adopt the approach of Section 3071(a)(1) in H.R. 7020 as passed by the House of Representatives in 1980.

The House committee bill appeared to require joint and several liability in Section 3071(a)(1), but it directed the Courts to apportion all unapportioned costs "to the maximum extent practicable." (H.R. 7020, 96th Cong., 2d Sess., §3071(a)(2)(B), 126 Cong. Rec. 26,779 (1980).) However, by adopting the so-called Gore compromise amendment by a voice vote on September 23, 1980, (126 Cong. Rec. 26,788 (1980)), the House would have permitted the Courts to impose joint and several liability whenever defendants failed to satisfy the statutory criteria for apportionment. (126 Cong. Rec. 26,7821 (1980).) (text of Gore amendment).

II. Suggested Amendments to the Liability Language:

Specifically, language similar to the following should be adopted in lieu of the current ambiguous standard, and as an alternative to the inflexible and inequitable "joint and several" standard without apportionment language contained in some reauthorization bills:

"Liability for Releases"

"(1) Liability shall be joint and several with any other person who caused or contributed to such release.

"(2)(A) If a generator or transporter of hazardous waste establishes that only a portion of the total costs of removal or remedial action are attributable to hazardous waste generated or transported by him, such generator or transporter shall be liable under this subsection only for such portion. If the owner or operator of any inactive hazardous waste site establishes that only a portion of the total costs are attributable to hazardous waste which was treated, stored, or disposed of in a period during which he owned or operated the site, such owner or operator shall be

liable under this section only for such portion. (emphasis added)

"(B) Following any apportionment under this paragraph, no person shall be required to pay in excess of his apportioned share of the total costs of removal or remedial action."

III. Suggested Discussion to Describe Explicit Legislative Intent with Respect to the Issue of Joint and Several Liability and Apportioned Liability:

In order to allow EPA and subsequently the Courts suitable flexibility and guidance in determining whether and how damages should be apportioned, the following legislative explanation should be provided:

"The standard of joint and several liability is intended to be applied in circumstances where, under common law, a party would be liable as a joint tort feasor. Typically, these circumstances occur when parties have acted in concert to cause a harm or where parties acting independently have caused an indivisible harm. For example, where the release, costs, or damages cannot be apportioned, generators, transporters, owners and operators would be jointly and severally liable even though they may not have acted in concert.

Conversely, where a liable party can demonstrate by a preponderance of evidence that only a portion of the release, costs or damage is attributable to the hazardous substance for which he is responsible, he shall be liable only for that portion.

It is the intention of the Committee that the Courts (and by extension EPA, the Department of Justice and the states) may consider apportioned liability in situations where responsible parties voluntarily come forth to produce information upon which apportionment may be based. In considering whether apportionment is mandated or should be equitably applied, the following and other appropriate factors should be evaluated:

(1) The ability of the party to demonstrate that his contribution to a release or disposal of a hazardous substance can be distinguished, taking into account the percentage of the total volume of hazardous substances at the facility contributed by the party, the nature of the harm to health and the environment caused by the hazardous substance for which the party is responsible, and the nature of the release or threat of release for which costs or damages have been incurred.

(2) The degree of toxicity of the hazardous substance for which the party is responsible.

(3) The degree of involvement in the generation, treatment, transportation, or disposal of the hazardous substance for which the party is responsible.

(4) The degree of cooperation of the party with federal, state, or local officials to prevent any harm to the public health or the environment.

(5) Whether the party was negligent or acted in violation of law in generating, transporting, treating, or disposing of the hazardous substance.

In requiring apportionment where appropriate, it is the intention of the Committee that the volume of hazardous substance contributed by each party be a primary consideration. However, toxicity and other environmentally harmful aspects of the waste of any party should be considered in cases where low volume wastes contribute in significant disproportion to the hazards presented at a site.

The Committee intends that all parties who are responsible for a release should be accountable for only their portion or fair share of the damage or clean-up costs caused, to

the extent that their fair share or apportioned liability can be determined pursuant to the criteria expressed herein. The burden is upon the contributor to prove by a preponderance of the evidence its contribution. For example, if a paint company, which delivered solvent to a reclamation facility listed on the National Priority List can demonstrate that it contributed five percent to the problem, it shall be permitted to pay that percentage of the total cost of clean-up.

Any party who voluntarily contributes to a cleanup or reimbursement of costs or damages in an amount in excess of his fair share or apportioned responsibility shall be entitled to contribution from other liable parties who have not so contributed or to reimbursement of the excess from the Fund."

IV. Legal Justification for Suggested Amendment and Legislative Discussion:

NPCA's suggested amendment and suggested accompanying legislative discussion would resolve a serious area of contention of whether and under what circumstances the government can obtain joint and several judgments. Currently, the government insists upon a 100 percent recovery for settlement from defendants it picks and chooses from among the group of alleged responsible parties. (Nine out of 130 in Midco, 30 in Stringfellow, 26 in Chem-Dyne, etc.)

There is a very serious question of whether a named defendant even has a right then to seek contribution in a third-party action against other responsible parties who the government elects not to sue.

As discussed in Section I, the Courts are struggling to interpret the existing law in individual enforcement cases due to its ambiguity with regard to the scope of liability. NPCA's recommendation would clarify the situation for both the Agency and the Courts, and would, in effect, codify such recent decisions as the Chem-Dyne, A & F Materials and Stringfellow.

At the threshold, five U. S. District Courts have concluded that federal courts may, but need not, impose joint and several liability. (See United States v. Northeastern Pharm. & Chem. Co No. 80-5066-CV-S-

4 (W.D. Mo. Jan. 31, 1984); United States v. A & F Materials Co., 578 F. Supp. 1249, (S.D. Ill., 1984); United States v. Wade, supra; United States v. Chem-Dyne Corp., supra; and U.S. v. Stringfellow, supra.).

Congress deleted the term "joint and several liability" from the final statute not because it did not wish joint and several liability to be imposed at all, but because it did not wish to impose a mandatory legislative standard of liability applicable in all situations "which might produce inequitable results in some cases." (Chem-Dyne). The key here is that while Congress intended to permit the use of joint and several liability, the Courts rely on the federal common law for pollution to conclude that if the harm is divisible, joint and several should not be the rule. (Stringfellow, A & F Materials).

The U.S. District Court in Stringfellow concurred with the U.S. District Court in A & F Materials to explain its reasoning for rejecting the Government's contention that Section 107(a) of CERCLA requires the imposition of joint and several liability:

> Finally, the Court concurs with the District Court in A & F Materials that the modern common law of liability for pollution provides a starting point for the development of federal common law:
>
> > When two or more persons acting independently caused a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, each is subject to liability only for the portion of the total harm that he caused. Restatement (Second) of Torts §443A and §881 (1976). The burden of proof as to apportionment is upon the defendant who seeks to limit his liability. Id. at § 875.
> >
> > The Court further concurs that the legislative history of CERCLA calls for flexibility in the adaptation of the Restatement approach. Joining the Court in A & F Materials, the Court concludes that the guidelines of the Gore amendment should be used in determining whether damages

should be apportioned. The criteria of the Gore amendment are these:

> (i) the ability of the parties to demonstrate that their contribution to a discharge, release, or disposal of a hazardous waste can be distinguished;
> (ii) the amount of the hazardous waste involved;
> (iii) the degree of toxicity of the hazardous waste involved;
> (iv) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;
> (v) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and
> (vi) the degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to the public health or the environment.

Such criteria would allow the Court to take into consideration, e.g., the plight of a small contributor that is unable to prove the extent of its contribution. Furthermore, the adoption of these criteria is entirely consistent with the views of the floor leaders that Congress wanted to avoid mandatory joint and several liability. Indeed, several members of the House, including Representative Gore, expressed the view that the final version was essentially the same as the flexible House version. 126 Cong. Rec. 31,978-79 (1980) (remarks of Rep. Jeffords); id. 31,980 (remarks of Rep. Gore) ("This is essentially the House bill."). (Stringfellow, p. 10).

IV. Conclusion:

NPCA's suggested amendment and explanation would incorporate the modern federal common law into the statute. The burden of proving apportionment is upon the contributor to the problem site. If he meets the burden, he is subject to liability only for the portion of the total harm that he caused.

In order to provide EPA (and the Courts) with flexibility and guidelines to determine whether damages can be equitably apportioned, the legislative explanation would establish specific criteria akin to the Gore amendment offered to the original House Superfund bill.

NPCA's suggested amendment would empower the EPA to impose joint and several liability where the harm is indivisible or against recalcitrant parties, but those who can carry the burden of proof would pay only their equitable contribution.

The call for a legislative amendment is designed to clarify serious ambiguity in the current law which is producing inequitable enforcement and impeding clean-up. It would also codify existing federal case law and thus assist the EPA and the Courts in deciding appropriate individual liability in the many Superfund cases which will be brought over the course of the next few years.

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May 9, 1984

STATEMENT BY LOUIS R. LAWSON, JR.
ON BEHALF OF SOLITE CORPORATION

BEFORE THE

SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
SUPERFUND REAUTHORIZATION HEARINGS
MAY 23, 1984

Mr. Chairman and members of the Committee, my name is Louis R. Lawson, and I am Fuels Division Manager and Research Coordinator for Solite Corporation, with headquarters in Richmond, Virginia.

My purpose in appearing before you today is to request that the Committee include an energy recovery exemption should it ultimately decide to adopt a waste-end tax or fee as part of the Superfund reauthorization.

Solite and its subsidiaries are engaged in the manufacture of lightweight aggregate, a product used by the construction industry in concrete and in lightweight masonry blocks. Lightweight aggregate is produced in rotary kilns through the application of intense heat to expand crushed clay, slate or shale. Lightweight aggregate weighs approximately half as much as crushed stone. Solite and its subsidiaries use large amounts of hazardous wastes consisting principally of industrial solvents and waste oils as fuels in the manufacture of lightweight aggregate. Solite and its subsidiaries have safely burned over 77 million gallons of hazardous wastes as fuels since 1976. The foregoing amounts to a savings of 55 million gallons of oil or 310 thousand tons of coal.

An energy recovery exemption would not only help to promote and encourage the safe and efficient destruction of hazardous wastes for energy recovery, but also help to ensure that cost-effective waste fuels would continue to be available to fuel-intensive manufacturing facilities such as those in the light-weight aggregate, cement, iron, steel, lime and phosphate industries.

Tests conducted under the supervision of the U.S. Environmental Protection Agency at one of Solite's lightweight aggregate facilities have demonstrated that Solite's kilns consistently achieve a hazardous waste destruction efficiency in excess of the 99.99% destruction efficiency required by the USEPA. Attached to my written comments is a brief summary of the Solite test findings prepared by Monsanto Research Corporation, which performed the tests under contract to the USEPA. The Solite testing program was one in a series of 30 test programs conducted by the USEPA on a wide variety of industrial furnaces and industrial boilers throughout the United States. The testing demonstrated that these furnaces and boilers generally achieved destruction efficiencies of 99.99% or greater, thereby safely destroying the wastes while conserving our Nation's natural gas, oil, and coal resources. The EPA has stated that they believe there is sufficient existing industrial furnace and boiler capacity to safely destroy all of the burnable hazardous waste generated in the United States today and for the foreseeable future.

Companies such as Solite can afford to continue to use hazardous wastes as fuels only as long as the cost of the wastes is less than the cost of conventional fuels such as oil and coal. The imposition of a waste-end tax on hazardous wastes burned for energy recovery would have a significant adverse impact on the cost-effectiveness of burning hazardous wastes in place of fossil fuels in the manufacture of products such as lightweight aggregate, cement, iron, steel, lime, and phosphate. The fee would add to the cost of burning industrial solvents and waste oils, and, along with the other costs of burning these waste fuels, narrow further the gap between the cost of burning waste fuels and the cost of burning conventional fuels. It is clear, therefore, that the ultimate impact of a waste-end fee on hazardous wastes used as fuels will be to discourage their use for energy recovery. The result would be extremely unfortunate, not only for the industries that rely on these waste fuels to hold down production costs, but also for the environment and natural resources of our Nation. Millions of gallons of burnable hazardous wastes that otherwise would have been safely destroyed would be disposed of either improperly or by methods less protective of the environment than high-temperature thermal destruction. Further, millions of gallons of imported oil would be burned needlessly.

We encourage you not to rely on the fact that hazardous waste disposal for energy recovery is not now regulated under the Solid Waste Disposal Act as the basis for an exemption from the fee. Although facilities that burn hazardous wastes for energy

recovery are currently exempt from USEPA regulation under the Solid Waste Disposal Act by virtue of existing regulations at 40 C.F.R. § 261.6 (1983), EPA has stated that it intends to regulate these facilities at some point in the future. See, 48 Fed. Reg. 14472 (April 4, 1983). Accordingly, should you choose to adopt a waste-end fee, we urge you to exempt from the fee the disposal of any waste or substance for energy recovery in accordance with the standards applicable to energy recovery facilities permitted under subtitle C of the Solid Waste Disposal Act. An exemption expressed in this manner would ensure not only that hazardous waste disposal for energy recovery would be exempted from the fee when it becomes subject to regulation in the future, but also that only those facilities that are operated in accordance with USEPA standards would be exempt from the fee.

I appreciate the opportunity to appear before you today, and I will be happy to answer any questions.

INCINERATION OF HAZARDOUS WASTE IN AGGREGATE KILNS*

JAMES A. PETERS AND DUANE R. DAY

MONSANTO RESEARCH CORPORATION
DAYTON, OHIO

ROBERT E. MOURNIGHAN
U.S. ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO

A high temperature (2000 degrees F) light-weight aggregate kiln was tested in Florida to measure the major smoke stack emissions from burning hazardous waste as supplemental fuel for energy recovery. Emissions measured included principle organic hazardous components (POHC's: toluene, tetrachloroethylene, methyl ethyl ketone, and methyl isobutyl ketone), particulate matter, trace metals, hydrochloric acid, sulfur dioxide, and nitrogen oxides. The wastes were burned with destruction efficiencies beyond the 99.99% required by the Environmental Protection Agency. Other pollutants in the smoke stack emissions were found in very limited quantities. None were considered dangerous to the environment or to the health and safety of operating personnel and the public. The tests showed that it is environmentally safe to burn some ignitible wastes as fuel in rotary kilns. There were no emissions dangerous to operating personnel or threatening to the public health and safety.

*Presented at the Tenth Annual Research Symposium on Incineration sponsored by the Environmental Protection Agency, April 3-5, 1984

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

THURSDAY, MAY 24, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to recess, at 10 a.m., in room SD-406, Dirksen Senate Office Building, Senator Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Mitchell, Baucus, Lautenberg, and Evans.

Senator EVANS [acting chairman]. Good morning, and welcome to the last of this committee's scheduled hearings on the proposed extension of our Superfund law.

Senator Stafford will be here in a few moments and asked that I chair the hearing in his absence.

We are scheduled to hear from four witnesses this morning, and three of them will be discussing health-related issues relating to Superfund. The fourth, but the first we will hear from, is our distinguished colleague from the House of Representatives, Representative Norman Lent. We are delighted to have him with us, and I know he has taken an active interest in Superfund, not only from his own district's interest, but because he is also the ranking minority member of the House Subcommittee on Commerce, Transportation, and Tourism.

I would welcome Representative Lent for whatever statement he wishes to make.

STATEMENT OF HON. NORMAN F. LENT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

Mr. LENT. Thank you very much, Mr. Chairman. I am pleased to be here this morning to report on some very recent progress in the House on reauthorizing Superfund.

Earlier this year I introduced a Superfund reauthorization bill, H.R. 4915. You might ask, why this year? Because I wanted to make sure that none of the momentum of the cleanup effort—which has been gained under the leadership of Bill Ruckelshaus and Lee Thomas—is lost. I believe EPA needs the assurance of an early Superfund reauthorization in order to plan for cleanup projects past the September 30, 1985, expiration date of Superfund.

If EPA and the Superfund contractors are unsure of what funding might be available next year, the pace of cleanups may be slow and in some cases stop. This result would be devastating to the program. So reauthorizing Superfund this year is the way to avoid a slowdown of the program and to give EPA a clear mandate to get on with the job.

My bill, H.R. 4915, is an $8 billion, 5-year reauthorization. Funding is provided through a combination chemical feedstock and waste-end tax and a 12.5-percent Federal appropriation. The waste-end tax serves a dual purpose: First, to collect revenues for the fund, and, second, to provide for the first time a strong financial incentive for a reduction in the land disposal of hazardous waste.

My bill also abolishes the postclosure fund, regulates underground storage tanks, and provides for the expeditious cleanup of Federal facilities.

Many of these provisions were retained in the new House compromise bill, H.R. 5640, which was introduced May 10. Agreement on this new measure, of which I am an original cosponsor, ended many months of long and sometimes painful debate on Superfund. It broke the impasse which had developed in subcommittee more than 1 month ago and which threatened House progress on Superfund this year.

I believe this new compromise is a measure which can quickly pass the House and, with the assistance from this distinguished body, can be on the President's desk by the end of this session.

As you are aware, we reported H.R. 5640 out of subcommittee yesterday by a unanimous voice vote. Full committee markup will be scheduled early in June. Our goal in the House is to bring Superfund to the floor by mid-September.

H.R. 5640 has broad bipartisan support. It has been cosponsored by Congressmen Jim Florio, John Dingell, the chairman of our full committee, Don Ritter, Ed Madigan, Bob Howard, chairman of the House Public Works Committee, John Roe, and myself, just to name a few.

I think it is fair to say that this compromise bill is remarkably similar to my own original Superfund bill. The controversial provisions which were holding up progress have been deleted, while the essential, strengthening provisions have been retained. For instance, the victims' compensation administrative system, a contentious issue, has been dropped entirely while a strict, mandatory site cleanup schedule has been retained.

I would like to just take a minute to describe some of the provisions of H.R. 5640 which I consider essential to a tough, but realistic Superfund reauthorization bill.

First, the fund has been greatly expanded. It will raise $9 billion over a 5-year period based primarily on an increased oil and chemical feedstock tax. This tax will be supplemented, however, with a tax on the disposal of listed and identified hazardous wastes. The 12.5-percent Federal appropriation is retained.

Second, the postclosure fund will be abolished. As the committee is aware, the postclosure fund was established to allow shifting of the long-term liability of permitted hazardous-waste-disposal facilities from the owners and operators of the facilities to the fund years after closure. Curiously, while the owners and operators were

let off the hook, generators are not. I have always advocated that the fund should be abolished since it is an unwarranted subsidy for land disposal and may well discourage utilization of state-of-the-art alternative technologies which should replace land disposal.

The postclosure fund has accurately and often been called the welfare program for dumps. Once the fund runs out—it is now capped at only $200 million—and the liability has been transferred, the Federal Government and the States are left to assume the moral, if not the legal, obligation to pick up all the costs of liability that would otherwise have been borne by the responsible parties. I am not aware of any other Federal program in which the Federal Government automatically underwrites the potential liability of firms exclusively engaged in business pursuits.

Third, H.R. 5640 tackles the emerging environmental crisis of leaking underground storage tanks in two different ways. First, it provides for the cleanup of environmental damage caused by these tanks and for the liability of responsible parties for these cleanup costs. Second, H.R. 5640 will abate the threat posed by these tanks by requiring them to be properly constructed and monitored for leaks.

Since half the population in this Nation depends on ground water for their drinking water, I believe these are the two important steps which must be taken to help protect the health of the American people.

H.R. 5640 also addresses the problems of those who live near hazardous waste dumps, by providing citizens the right to petition the EPA Administrator for health effects studies and emergency relief, such as drinking water supplies, in those cases where they have been exposed to hazardous substances released from sites.

The bill would also establish a Federal cause of action for those injured by exposure to hazardous substances. This will enable injured parties to go into Federal court and sue for damages, including medical expenses, all lost income, economic and property loss, and pain and suffering. The standard of liability for these actions would be the same as now in section 107—that is, strict, and joint and several.

Finally, H.R. 5640 attempts to speed up the slow pace of cleanup activity under Superfund. Since after 4 years only six sites have been cleaned up under this program, the bill establishes a strict timetable for cleanup which includes the goals of beginning onsite cleanup actions at 150 sites annually and completing cleanup of all 546 sites now on the national priorities list within 5 years.

Mr. Chairman, these are some of the key elements of H.R. 5640 which are designed to substantially strengthen the Superfund Program. Getting Superfund reauthorized this year will insure that these changes are in place in a timely fashion and that the pace of site cleanups does not falter. This is critically important in view of the enormity of the task facing EPA and the States.

In addition, early reauthorization will demonstrate—and I think this is most important—to the American people that this Government is serious about cleaning up these toxic dumps. Given the sorry legacy of the program to date, I believe the American people deserve that reassurance, and they deserve it this year.

I will be doing whatever is necessary on the House side to have a Superfund reauthorization bill on the President's desk by the end of this session. I hope that your efforts here in the Senate will be similarly directed.

Mr. Chairman, this completes my prepared statement, and I will be pleased to respond to any questions you may have.

Senator EVANS. Thank you very much, Representative Lent. I am pleased with the work and the progress that appears to be going on on the House side. It will be helpful to those of us on this Senate committee, and maybe we will do something to follow your example. I hope so.

I am curious about a couple of things as it relates to the House bill. You talk about a broadened tax base from chemical feedstocks. Have you broadened the number and variety of feedstocks which would be subject to the tax?

Mr. LENT. Yes, Mr. Chairman. There is, we think, a fair and more equitable broadening which has taken place of the available feedstocks; yes.

Senator EVANS. I am also curious about the waste-end tax. I have had some apprehensions about waste-end taxes to the degree they might cause especially small users of hazardous substances to try to avoid any payment of a waste-end tax simply by midnight dumping. Has that possibility been faced in any of the House debate or in the testimony yet?

Mr. LENT. Certainly you are absolutely correct that this is a difficult issue. It is a contentious issue—whether in the interest of our public policy we ought to abolish the waste-end tax or whether we ought to have it in there. There is, I would say, almost overwhelming sentiment in the House for the abolishment of the waste-end tax—rather for the waste-end tax.

It is felt that this kind of a tax on hazardous waste being dumped into landfills will encourage dumpers, people who have waste, hazardous waste, on their hands, to try to find an alternate means of disposal of these hazardous wastes. There are many new technologies that are out there now that can do this job, but they are more expensive than simply dumping the stuff in the ground.

This tax, hopefully, will direct these people not to midnight dumping spots, but rather to more up-to-date, scientifically state-of-the-art hazardous waste facilities that will properly and in an environmentally safe way dispose of these wastes.

Senator EVANS. Senator Mitchell.

Senator MITCHELL. Thank you very much, Mr. Chairman.

Congressman, it is good to see you again.

I am sorry I was not present during your statement, but I wonder if you could describe, briefly at least, that aspect of your bill which deals with injury to individuals.

Mr. LENT. The provisions of the compromise bill merely add a direct cause of action in the Federal court for the first time for a party injured as a result of exposure to hazardous waste. Dropped out of the compromise bill are the original provisions in the Florio bill which would have set up an entire administrative scheme for compensation of victims of hazardous waste, sort of a black lung comprehensive system expanded to anyone who might have been exposed to hazardous waste.

We had some interesting testimony from the assistant dean of the NYU Law School who testified, after reading the provisions in the original bill, that were it to be passed in that form, she would simply get in her automobile and drive up to Niagara Falls and ride once or twice past the Love Canal site and go back to her apartment in New York confident in the knowledge that, whatever disease she might ultimately come down with later in life, she would have a cause of action under the victims' compensation bill. That is how broad it was originally drafted. That is how extensive the many provisions in it were in terms of presumptions of liability on the part of the dump.

That has all been stripped out. Now there is instead a straight cause of action in the Federal court. The presumptions have been eliminated for the most part.

Senator MITCHELL. Does the House bill preempt State causes of action or is it silent on that, so that a person could then have the choice?

Mr. LENT. It would give the injured party, as I understand it, Senator, a choice of forum as between the Federal or the State. The victim obviously has a cause of action in State court today——

Senator MITCHELL. Right.

Mr. LENT [continuing]. But you have a whole cafeteria of statutes of limitation and methods of measuring the right to sue.

For example, in my home State of New York, which otherwise is a liberal State and has fairly decent statutes, the time for the bringing of the cause of action is severely limited from—I think it is from the time of exposure, rather than from the time of the discovery of the injury, which could be 15 or 20 years later.

The Federal cause of action, the Federal statute of limitations, would apply, and it is my understanding that this is much more liberal and starts ticking from the time of the discovery of the injury, rather than from the time of the exposure to the hazardous waste.

So a New York person who felt himself injured could go into Federal court, notwithstanding the fact that the State statute of limitations has expired.

Senator MITCHELL. Thank you very much, Congressman.

Thank you, Mr. Chairman.

Senator EVANS. Senator Lautenberg.

Senator LAUTENBERG. Just to welcome Congressman Lent here.

I am pleased that this represents a bipartisan effort on the House side.

I quickly read your statement and see that you think that we might get some action midsummer on the reauthorization of Superfund. That would be very important.

I congratulate you and other members of the committee, the subcommittee, on the actions you have taken and look forward to a successful conclusion.

I was interested, Norman, in your plaudit about the liberal statutes. I didn't think you were liberal.

It is nice to see you here. Welcome.

Mr. LENT. Thank you very much, Senator.

If I could just add one footnote to my response to Senator Mitchell's question about the stripping out of victims' compensation, let

me also add that in this bill you will find provision for emergency relief for those citizens who are faced with some sort of catastrophe in their community. For example, there are provisions in there for health studies by the EPA and also for replacement water supplies, that sort of thing.

The victims' compensation provision, as it was originally provided, has been stricken.

Senator LAUTENBERG. The compensation factor is one to be left to the courts, I guess, as it presently is?

Mr. LENT. That is right.

Senator LAUTENBERG. Do you see any likelihood that there is going to be further interest in developing a compensation scheme over there?

Mr. LENT. Yes. I am not one of those who is adamantly opposed to a victim's compensation scheme, but I think it is a contentious issue, particularly when it is on the eve of adjournment, so to speak. I feel that our interest ought so much to be in favor of the cleanup of the hazardous waste dumps themselves as a separate issue that we ought to move forward with this measure in that form, stripped of the more contentious issue of the victims' compensation. This is an issue which might be addressed separately. Perhaps it should be a separate bill, something that we could look at next year, but not to encumber this legislation, which is aimed specifically at the cleanup of the hazardous waste dumps. Keep this program moving so that we have funds in the pipeline so that we can plan ahead what dumps are going to be cleaned up, and so forth. To burden this bill with something that is contentious, as contentious as victims' compensation, I think would be to defeat the bill.

Senator MITCHELL. Congressman, as you know, we have been down this road before. That is exactly what was said in 1980 when we first passed the Superfund bill. Here in the Senate we had several very contentious meetings among Senators who both favored and opposed the bill. It is striking, the almost identical words were used, that we want to get this bill through and this is a contentious item and so let's wait until next year, which is what we did under the threat of filibuster. Of course, the next year being 1981, I, right off the bat, introduced the victim compensation legislation and it has languished until now. We have not been able to get it moved, and this appears to be a vehicle for doing so.

If we don't do something now, it is at least possible, if not probable, that the same thing will occur until the next reauthorization of the Superfund.

I appreciate your comments on it and I appreciate what you have done in the House.

Thank you.

Mr. LENT. Thank you, gentlemen.

Senator EVANS. Thank you very much. We would be delighted to have you join us on the dais, but I suspect that you have just as much to do as we have.

Mr. LENT. Thank you, Mr. Chairman.

Senator EVANS. We appreciate your coming.

The next witness is Dr. James Mason, Director of the Agency for Toxic Substances and Disease Registry from Atlanta, GA, who will

be accompanied by Dr. Vernon Houk, Assistant Administrator for the Agency for Toxic Substances and Disease Registry, also the Director for the Center for Environmental Health in Atlanta, GA.

Dr. Mason, we are delighted to have you with us. Please proceed.

STATEMENT OF JAMES O. MASON, DIRECTOR, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, ATLANTA, GA, ACCOMPANIED BY VERNON N. HOUK, ASSISTANT ADMINISTRATOR, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY, AND DIRECTOR, CENTER FOR ENVIRONMENTAL HEALTH, ATLANTA, GA

Dr. MASON. Thank you.

Mr. Chairman and members of the committee, we are pleased to have this opportunity to discuss the Department of Health and Human Services' progress in implementing the health activities under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

You have already mentioned that I have with me today Dr. Vernon N. Houk.

Under Superfund, the Agency for Toxic Substances and Disease Registry [ATSDR] coordinates provision of emergency consultations and health-hazard assessments to the Environmental Protection Agency and the various States at toxic-spills and toxic-waste-disposal sites. The Agency also provides testing, conducts health studies, and will establish registries where indicated. These same activities are carried out at Superfund remedial sites.

In all instances, the Agency's purpose is twofold: First, to respond to the immediate needs of protecting the public health, both of the surrounding community and workers at the site, and, second, to add to the scientific information in order to make more specific health recommendations in the future.

The work conducted by ATSDR under Superfund relates to work that the Public Health Service does under authorities with different funding sources. The National Institute of Environmental Health Sciences of the National Institutes of Health and the National Toxicology Program are heavily involved in animal toxicological testing. The Food and Drug Administration is concerned with adulteration by toxic chemicals of foods or other products it regulates. At CDC, the National Institute for Occupational Safety and Health, or NIOSH, is concerned with toxic exposures to workers and involved in the design of worker-protection methods.

CDC's Center for Environmental Health conducts a broad range of nonoccupational environmental programs, including those relating to non-Superfund toxic substance exposures. One very important program being carried out by CDC consists of the studies of the effects of dioxin exposure on Vietnam veterans. The results of the first of these studies, the Vietnam veterans' birth-defects study, are expected to be completed in a few weeks. All of these and many other activities of Health and Human Services interrelate with and enhance the work we do under Superfund.

Now I will use the health-related provisions listed in section 104(i) of the current Superfund law as an outline and review with you what we have done and what we plan to do.

First of all, the Agency for Toxic Substances and Disease Registry has been established. This was announced in the Federal Register by Secretary Heckler on April 25, 1983. The Agency coordinates all HHS activities under Superfund and serves as the focal point for coordinating health activities with the Environmental Protection Agency and all other Federal agencies involved in the Superfund program.

Through the coordinative efforts of ATSDR, and with the strong support from the other participating components of the Public Health Service, we have since we last testified almost 2 years ago before this committee greatly increased our Superfund public health activities.

With regard to registries, the proper use of registries is a very complex issue. We have identified several main areas of concern which are included in my written testimony.

A PHS group has worked vigorously to define the circumstances under which establishing registries is scientifically useful and would benefit exposed individuals. A draft position paper has undergone peer review, and we expect to have this document available early next week.

We have established a central list of individuals exposed to dioxin in Missouri. Major efforts are underway to develop two surveillance systems which deal with toxic exposure, one of adverse reproductive outcomes and the other of sentinel disease and conditions.

Another related activity is the consideration and implementation of uniform methods for collecting information on serious diseases, and mortality, and on human exposure to toxic substances. A PHS committee has studied this in depth and made a series of recommendations which are included in my written testimony.

Priorities have been established for the recommendations, and we are now working on plans for their implementation.

With regard to an inventory of literature, research, and study, the National Library of Medicine has developed from the literature new data records for 746 chemicals and has updated the information for another 23. In addition, the Library is making its data systems easier to use and simplifying the information format, and the data entry, and retrieval processes.

With regard to a listing of closed or restricted areas, over 1 year ago we initiated work to develop this list. We found that data relating to areas closed or restricted because of toxic contamination are not routinely collected by State or local agencies. The data we collected, therefore, resulted in a very incomplete listing. We are now in the final stages of awarding a contract to the National Governors' Association to design and implement a data-collection system in conjunction with all States and territories.

I will now discuss the medical care and testing provisions of the law. We have not developed a separate mechanism to accomplish this, but we do conduct some testing in cooperation with State and local health authorities. We also provide consultations to physicians and hospitals in the treatment of exposed patients. Existing health-service-delivery systems, together with the consultations we provide, are felt to be adequate for dealing with the need for health services.

The numbers of health consultations we have provided to EPA, State health departments, and others in emergency situations have increased during the past 2 years. For example, in fiscal year 1982 we provided 12 such health consultations. In fiscal year 1983 the number of these consultations rose to 358. Our fiscal year 1984 projection is 650 consultations. Attachment 1 to my written testimony indicates that consultation trend.

When appropriate and necessary, PHS has worked with State health departments to collect biological samples and to test them to determine levels of exposure in community residents. Three examples of CDC's laboratory testing to determine the extent of human exposure in emergency situations are included in my written testimony. Time does not permit me to say anything detailed about them.

Routine testing of blood-lead levels by the State of Pennsylvania provided us with information which led EPA to take immediate cleanup action at the Brown's battery breaking site.

We have initiated testing at a number of other sites, either in conjunction with pilot health studies or as part of a communitywide health study.

In addition to using existing testing methodology, the Center for Environmental Health is developing new tests for assessing the damage done from exposure to toxic substances. We are in the preliminary stages of developing new methodologies to assess the damage from toxic exposure to genetic material, the immune system, and the neurological system.

Our staff has made important strides in assessing the body burdens of PCB's and in developing new methods for measuring the body burdens of dioxins and furans in both human fat and blood.

With regard to surveys and studies to determine relationship of exposure to illness, over the past decade scientists have expended many millions of public and private research dollars in an effort to investigate and understand the complex relationships between human health and exposure to suspected environmental pollutants. The basic tools for this ongoing search are laboratory studies in animals and epidemiologic studies involving humans.

We are committed to using these tools to demonstrate the links where they exist. Many of the epidemiologic tools, however, unless impeccably used with large populations, will yield inconclusive results—neither positive nor negative. It is very tempting for some to use inconclusive results that tend toward the negative as definitely negative results. It is equally tempting for some to use inconclusive results which tend toward the positive as unequivocally positive results. Either of these actions is incorrect and unfortunate, and we must be alert to recognize when results are, in fact, inconclusive.

One of the cornerstones of the Superfund program is expanding what we know about the health effects of toxic substances found in abandoned waste sites, or commonly involved in toxic fires, or spills. A group of scientists from throughout the Public Health Service has evaluated the data currently available on the toxicity of the chemicals EPA has found at high-priority-waste-disposal sites.

The National Toxicology Program has taken a list of substances needing additional research and has determined the appropriate

toxicological testing required. So far, the National Toxicology Program has identified 24 chemicals or classes of chemicals requiring additional testing and has already begun testing 6 of these with highest priority.

Another major effort to expand what is known about the health effects of toxic substances is to conduct epidemiological studies on populations presumed to have been exposed. We have developed a standardized four-step approach to site-specific health studies.

As part of our health consultations to EPA, we have conducted over 100 health assessments. We have also conducted several pilot health studies to assess exposures to PCB's in Bloomington, IN; Ashtabula, OH; Norwood, MA; and Jessup, GA; exposures to benzene in Perdido, AL; and exposure to mercury in Ludowici, GA.

Major communitywide health studies have been conducted to assess the health effects of lead exposure at Superfund sites in Idaho and Montana and dioxin exposure in Missouri.

A protocol has been completed and reviewed for a study of the community living near the Hollywood dumpsite in Memphis, TN. Other studies being developed include assessing arsenic exposure in the Commencement Bay site in Tacoma, WA; trichlorethylene exposure in Battle Creek, MI; and dioxin exposure in additional locations in Missouri. We are also developing a study of excess bladder cancer in community residents and in former workers at the Drake chemical site in Pennsylvania.

I have attached to my testimony a table detailing the health studies we have completed, those underway, and those under development.

The provision of the law mandating treatment of exposed individuals in PHS hospitals and other facilities can no longer be implemented because under other legislation these facilities have been closed.

Sections of the Superfund legislation provide for the National Institute for Occupational Safety and Health to be an active participant in the protection of workers at toxic emergency sites and in the cleanup of hazardous waste sites.

To fulfull this mandate, NIOSH has undertaken a number of projects to determine whether worker-protective gear actually protects workers under field conditions. NIOSH is also taking the lead in disseminating worker-safety information through training courses for State and local health and other governmental officials and through the development of a guidance manual on the protection of workers at sites. This manual will be completed this year.

All of the information and approaches mentioned above are combined with the experiences of and expertise of epidemiologists, chemists, occupational physicians, and toxicologists and applied in a scientific, specific way to Superfund sites. This enables us to make the best possible medical and scientific judgments on the degree of hazard posed to the surrounding community or to workers at these sites. These health assessments are primarily conducted by CDC's Center for Environmental Health, with assistance from NIOSH on worker-health issues and from the Food and Drug Administration when there is a potential for adulteration of foods and other FDA-regulated products.

As a result of the increased interaction, the number of consultations and assistance provided by HHS to EPA has dramatically increased from the 87 consultations on remedial sites done in fiscal year 1982. In fiscal year 1983, we provided 781 consultations, and for fiscal year 1984 we project the total of 950 consultations at remedial sites.

Today we enjoy a fine working relationship with our partners in EPA.

The Agency's operating budget for fiscal year 1984 is approximately $7.5 million, with 47 full-time equivalents allocated to carry out these activities. This amount includes $5 million in new authority and $2.5 million from unobligated 1983 funds. I should point out that these amounts do not include funding for implementing health studies. Additional funds are awarded by EPA for health studies under separate interagency agreements; they currently total $1.1 million for studies of dioxin exposure in Missouri and lead exposure in Montana and Idaho. EPA has also set aside $4.8 million for special health studies this fiscal year. We expect to complete protocols, sign interagency agreements with EPA, and establish cooperative agreements with States for studies which will obligate the $4.8 million by the end of this fiscal year.

We are committed to the task that we have been given. In the meantime, as we develop new knowledge and carry out these activities, we believe that prudent public health practice dictates that decisions we make be based on the best scientific available data.

Dr. Houk and I will be happy to answer any questions the committee might have.

Senator STAFFORD. Mr. Mitchell, since I was forced to be elsewhere earlier—and I apologize to the witnesses for that. I would yield to you to go ahead.

Senator MITCHELL. Thank you, Mr. Chairman.

Dr. Mason, thank you for your statement.

The study of the effects of toxic wastes on individuals, the health assessments that your Agency deals with, are an obviously important matter for the people involved. Recently, the EPA's Superfund Task Force preliminary assessment concluded that virtually all of the most commonly encountered toxic pollutants at waste sites are known to exhibit chronic toxicity and, therefore, may cause human health injures after months or years at extremely low levels of exposure. Site-specific studies are needed to quantify the hazardous substances, and their volumes, and concentrations to more precisely estimate the risks at each site and to determine the remedial actions needed to reduce those risks.

I notice in your statement, you said:

> Usually HHS gets involved at specific sites at the request of EPA, but can also be asked for assistance by a State or can directly initiate action on its own.

Are there specific criteria by which you determine when you will get involved and, more precisely, when a health assessment will be conducted at a site?

Dr. MASON. Dr. Houk, will you respond to that?

Dr. HOUK. The process, Senator Mitchell, is to look at all of the environmental data that we can get our hands on that EPA has collected over the years, that the State has collected, or others;

look at the population of concern, the people around that site, to determine if there are avenues of exposures to those individuals; to look at all the toxicological data that is available, particularly in the animal studies, which is the most voluminous, there is very little in human studies; and look at the kinds of chemicals, whether they are persistent, whether they can be measured in individuals or not. If they can, an attempt is made to measure those chemicals in those individuals, and then take a number who are thought to be the most highly exposed individuals and do a very small pilot study around those. If those are positive, then to extend that study into the general population that is thought to be exposed to that particular site.

Senator MITCHELL. Of the over 400 sites listed on the national priority list, have you done what you have just described with respect to each of those sites?

Dr. HOUK. We have not completed the task for each of the sites.

Senator MITCHELL. How many have you completed?

Dr. HOUK. We have completed part of that task, somewhere around 100 or 150 individual sites, not the total task in all of those.

When one looks at the chemicals and when one looks at how to measure things in them, let me give an example, if I may—the Hollywood dumpsite in Memphis——

Senator MITCHELL. If I could just interrupt and try to get a view of the whole picture, is it your intention, and are you now in the process of performing the process you just described with respect to each of the 421 sites?

Dr. HOUK. As we can collect the data from EPA and as the environmental data comes in, and as our staff is available, yes, we have put priorities on the sites. Some of the most hazardous, that we consider the most hazardous, will be done first.

Senator MITCHELL. What I am trying to get at is the process by which you determine whether you are going to conduct a health assessment. I gather your answer is that you are going to do one at every 1 of the 421 sites?

Dr. HOUK. We would look at the environmental data at each of the sites and look at the population that had potential for exposure. If there were no population that had potential for exposure at a site, no, we would not do a health assessment. If there were a population that had some potential for exposures, yes, we would.

We also would look at the different kinds of sites. Many of these sites have very small populations. If they have similar kinds of chemicals in individual sites, we would be combining studies around the sites where they have the similar kinds of chemicals.

Senator MITCHELL. Then I gather what you are saying is that there is a two-step process. First is, as you described it, to look at the sites, and the populations, and the potential risk, and determine whether or not a health assessment study is necessary, and then you either do or do not do one, depending on that first decision. Is that correct?

Dr. HOUK. Yes.

Senator MITCHELL. The 100-odd figure that you use, do I understand that to be the first step of the process with respect to the 100-odd sites?

Dr. HOUK. Some of those would have been included in all four parts of the process—to have completed health studies or to have major health studies going on. Some of them are just looking at the environmental data and the population data.

May I give one example, if I may, Senator? One of the sites on the top 10 priority list is the contamination of an aquifer in the Four Corners, the so-called Tar Creek site. That aquifer is so contaminated that the water is unpotable. So doing a health study around that particular site would not be justified. In our opinion, any action taken around that site should be engineering devices to protect the contaminated aquifer from contaminating an uncontaminated aquifer.

Senator MITCHELL. OK, but I am really trying to find out what it is you have done in terms of the total number of sites involved. There are, I understand, at this time about 420 sites on the list. What you are saying is that—what was the figure used, 100 and what?

Dr. HOUK. I do not know the precise figure, but I estimate it as approximately 150.

Senator MITCHELL. You have conducted what appears to be a preliminary inquiry of some kind. Based on that preliminary inquiry, you then decide whether to proceed with a full health assessment.

At how many of those 150 sites have you conducted a full health assessment?

Dr. HOUK. Full health assessments as opposed to a health study—a full health assessment and advising individuals what action to take, EPA, and the community, to protect health—a fair number. A full health study, very few. Just a few of the sites, for example the dioxin sites in Missouri, for which the pilot phase has been completed.

Senator MITCHELL. The words "fair number" and "very few" mean really quite different things. Can you be more specific than that?

Dr. HOUK. Yes; the difficulty is what you are calling a health assessment. Let me give an example again, if I may.

Around asbestos sites where there is free asbestos floating around, we do not believe that we need to do health studies to determine the health effects of asbestos. There is sufficient evidence that it is harmful to human health and that action should be taken to protect people from exposure. In the asbestos sites that we have dealt with, several in New Hampshire, Pennsylvania, Arizona, and others around the country, we have issued health advisories of what should be done on each site to protect people from being exposed, but that is not a health study.

Senator MITCHELL. I am going to defer to Senator Lautenberg here for 1 minute, but I have just been reminded that the number of sites on the priority list has now been increased to 546. The EPA currently estimates that total number will be between 1,400 and 2,200.

What I would like from you is a much more specific description of what it is you have done. I have used phrases such as "health assessment" and "health study" which have been used in statements. I am not attempting to dictate to you how you describe

them. You describe them in the manner most accurate for your purposes.

What I would like to know is what it is you have done. At how many sites have you taken action? Would you be precise in describing what that action consisted of in whatever form of descriptive language you choose to use?

I then would like to ask you—and you obviously have to do this in writing—is it your intention to conduct some form of preliminary inquiry at every one of the Superfund sites, 546, the projected 1,400 to 2,200? How long do you estimate that will take you with your present budget level and manpower? Depending upon that answer, do you feel that additional resources are necessary to do the job?

What I am trying to get at is, if it is important to do some form of inquiry, a health assessment or health study, or whatever you want to call it, at some site, why is it not important at all sites? Should we change the law to require it, so that we don't have what appears to be an ad hoc approach to the thing? (See p. 712.)

I will now defer because I have taken a little bit more than my 10 minutes. We have a 10-minute rule here, and I will come back to this.

Dr. MASON. Could I comment? Would that be proper?

We will be happy to respond. The point I would like to make is that you are absolutely right that the number of sites is growing. What we have tried to do with those resources we have, in terms of persons and money, is to get the biggest bang for the buck. In other words, Dr. Houk has been using his staff, to review these sites as they are reported. Where there is almost no data, and there does not appear to be a great hazard, he may leave it and go on to another where there are data that indicate there is a great hazard. He is trying to provide the greatest public health service to the people of this Nation.

Senator MITCHELL. And I appreciate that very much. Please be assured that I intend no criticism of either you or Dr. Houk in my remarks.

What I am trying to get at is it is your responsibility, as you just described it, to do the best job you can within the limit of the resources you have available to you. It is our task, our duty, to make a judgment on the level of those resources.

I don't want you to tell me that you only have so many people and so you have to take the most important sites. That is commonsense, and I think that is something you should be commended for. What I want to know is: What is the magnitude of the task? How much does it involve? How long will it take to do it with present resources? Should there be more resources? Should it be made mandatory?

If I lived near site C and I found that you had made some form of health assessment, a health study, at sites A and B, I would probably want to know why one wasn't done at site C. Now there may be several reasons for that. One may be that it is not warranted. The other may be that you only have so much in the way of resources and you think sites A and B are more pressing problems. We cannot make a judgment on what the level of resources should

be, how this program should be structured, unless we have the answers to the questions I have just raised.

What I am suggesting is—and, again, I repeat, it is no criticism of you gentlemen whatsoever—it does not do us any good to just know that you are doing the best you can with what you have. We assume that to be the case. That is, I think, the minimum level of what we would all expect of public officials. What we have to know is, what is the size of the task; is it an important task to perform; is it a worthwhile task to perform in terms of the expenditure of public funds as measured against the public benefit that flows from it; and how can we, then, make the judgments? That is what I want to get at.

I thank you both, and I apologize, Senator Lautenberg, for going further. You go ahead, sir.

Senator LAUTENBERG. As a matter of fact, Senator Mitchell, you and I are very much on the same wavelength. I do appreciate the testimony and the information that each of you has supplied.

I have a couple questions, and some part of this from me, gentlemen, is a familiarization process. I am deeply concerned about the Superfund, its functioning, and how we protect our public health, but it is a new program for me. Therefore, if I back you up just a little bit, understand that the inquiry is to get information, not to criticize.

The principal function of your Agency, Dr. Mason, can you describe it in short form for me, please?

Dr. MASON. The Agency for Toxic Substances and Disease Registry is responsible for the health aspects of the Superfund legislation.

Senator LAUTENBERG. How critical a part of your assignment—and I am not asking for a pace; I am talking a quantification—how critical a part of your Agency is the health registry section?

Dr. MASON. Health registry specifically?

Senator LAUTENBERG. Yes.

Dr. MASON. Where we feel that a health registry can contribute to our scientific knowledge and to protection of people, it is very important.

Senator LAUTENBERG. Am I right in that there are only six people employed in that registry process at this juncture?

Dr. MASON. We have currently 47 full-time equivalents that have been provided for the Agency's work. Now we have——

Senator LAUTENBERG. The dioxin registry, I think, has six?

Dr. MASON. There is a list of people exposed to dioxin.

Dr. HOUK. There are no people specifically assigned only to the task of doing a registry. The first grouping that we have now is a selection of the individuals in Missouri, and that will be added to by New York and a few other States who have dioxin exposure, if it becomes important to follow them on the long term.

That is part of an overall health study, and those names will be added to the registry as part of either a pilot study or community survey or even an overall health study.

Senator LAUTENBERG. Dr. Mason, I think you registered some concern or skepticism, if I can include that, about premature judgment on things, the hazardous nature of these substances, and you

said it is not appropriate to judge them either positively or negatively, too early.

Dr. MASON. I said that and also said that with lack of knowledge we have to be conservative. When we don't know, we had better be careful.

Senator LAUTENBERG. I ask you both as professionals—some things are so obvious, as supported by Dr. Houk's statement on asbestos, for instance, that you just go ahead and tend to these. You support that point of view, Doctor?

Dr. MASON. Absolutely.

Senator LAUTENBERG. Is this task, this health registry, a necessary function in your view? I know that you are committed to support it, and so forth, but is it—does it contribute significantly to the protection of the public health?

Dr. MASON. Let me give as an example the polybrominated biphenyl registry that has been established cooperatively between the State of Michigan and Health and Human Services. This has been in effect now for a period of 8 years.

People were enrolled into that registry at a cost of several hundred dollars per person. The cost to maintain that registry is about $100 per person per year. That has now gone on for 8 years. We feel it is very valuable because we can follow, in this case, a group of people with known exposure, known blood levels of this particular long-in-the-human-body chemical. To be able to follow this population for a period of 10, 20, 30, or even 40 years, is worth its weight in gold, because I do not know how else you really find out what happens to people with this type of exposure.

The crux of the matter is identifying populations where you can document exposure, and where you can follow them for periods of time. A good study may result in expenditures of millions of dollars over a period of years. When a registry meeting these criteria will either protect people or provide us with more scientific knowledge, I am 100 percent for that.

Our hesitancy is with registries of dubious value. Let's do it where it is indicated.

CDC has just created a document which will be published within a week which indicates when a registry is likely to have high payoff value and when registries are less likely to be successful.

Senator LAUTENBERG. Is there a duplication in other departments of Government that have this information? We have established that it is a critically important function. Is there duplication taking place elsewhere in terms of the health registry type of function? You make several references.

Dr. MASON. I do not think there is duplication. Within the Department of Health and Human Services there is very careful coordination. We not only have our own agency coordinating role, but there are several PHS-wide collaborating committees. We are really building on each other's strength.

Senator LAUTENBERG. There are departments within some of our States that keep similar records?

Dr. MASON. That is right.

Senator LAUTENBERG. I am sorry to rush you along here.

The fact of the matter is that this is very important—to understand the consequences of exposure to hazardous materials. I come

from New Jersey, and what we saw in early exposure to asbestos resulted in death and illness 20 or 30 years later. I think that kind of began this process of recognition.

Therefore, I must ask you to help me through this and tell me why it took a lawsuit to get this registry underway. How long have you been with the Department?

Dr. MASON. This goes back before my being with the organization. I will call upon Dr. Houk.

Dr. HOUK. Thank you.

The answer Dr. Mason gave in his testimony about inconclusive studies, negative and positive, referred primarily to studies in humans. There is a great deal of evidence of a toxicological nature, in the animal models, in the animal studies. We use those. They are very important. Just because an adequate study has not been done in humans to show it is or is not true would not make us make corrective actions and recommendations in humans about what was going on.

One of the real difficulties of a registry, Senator, is simply the long-term commitment to cost and the ability to follow people. If you put people in a registry, you have to have the ability to follow them, to have periodic examinations of them, to be able to periodically notify them. Just to keep track of people, costs in the Michigan registry are about $100 per person per year.

In addition, 30 percent of the population of this country moves each year, 8 percent crossing State lines. Being able to follow those people in the absence of a mechanism, such as using IRS records, social security records, other things— one of the things that I think that the medical people are going to have to have some help on this ability to track people down and yet protecting their rights and protecting their privacy.

Senator LAUTENBERG. I think, however, when you discuss the cost of treatment or hospitalization or the damage to society or the individual, a child born handicapped as a result of the parents' exposure, my guess is that it costs our society substantially over $100 million a year and $100 a year per person.

We are on the same side of the issue, but I think we may disagree on pace and resources needed.

One of the things that struck me in your presentation was that you said you had a budget of $7.5 million. Is the budget primarily personnel costs?

Dr. MASON. The budget, of course, covers the cost of personnel and also activities that we are carrying out within other organizations of PHS such as the Library of Medicine and the National Toxicology Program.

Senator LAUTENBERG. If it is not significantly in areas other than personnel, we are talking about enormous per capita cost here: 47 people and $7.5 million is $150,000 a person. I know that the Government does not pay that well.

I just wonder why we cannot get more action, frankly, out of the Department. Why is the pacing so slow? Senator Mitchell mentioned before, the person lives near a chemical or hazardous waste site 5th in line, or 20th, or 50th in line, does not feel any better about the fact that they know that they are on the list and that they will eventually be reached. That is the concern.

Dr. HOUK. Because one of the most precious commodities, as you well know, is people, in the Superfund budget, the way we do it, we contract out as much as we possibly can contract out. All of the health studies are done as cooperative agreements between us and the States. Virtually all the toxicological testing of the national toxicology program is done on contract. A great deal of the NIOSH activities including preparing a training manual, et cetera, is contracted out.

It is a misconception, however, that when one contracts out, one does not need people. If one is going to have a quality product at the end of that contract, in my view one needs to have people monitoring those particular contracts.

Most of our average personnel costs that are involved in this agency probably are on the order of $30,000 to $35,000 per person per year. If you are looking at an average grade of us, we are probably around a 12, 13, or 14.

Senator LAUTENBERG. OK. This is not something we have to debate. If you would give us a copy of the budget, so that we can see that breakdown, we would appreciate it. (See p. 756.)

I want to turn to Senator Mitchell, but I just have a couple more things.

I do not think, Dr. Houk, that the question as to why it took so long and why it took a lawsuit after a 1980 law was enacted to get the Agency functioning was answered in your comments. Could you return to that?

Dr. HOUK. To establish a registry has to have some scientific use to doing it. Simply to register everybody who has been potentially exposed to a toxic chemical in this country, in my view, serves no useful purpose, and we already have one of those. That is the U.S. census, because everybody has been exposed.

To be able to have a mechanism to follow the people, to be able to determine what sort of exposure, what sort of health studies, what intensity of followup needs to be done in order to get the individuals involved and get them onto a registry, and the ability to be able to follow them—registries in our view, sir, after the issue of being able to follow people can be resolved, have two purposes for people on exposure registries:

One, where there is sufficient toxicological data to suggest that people may be harmed and where we do not have proof from human studies whether they are or not; this group should be, in my view, established on a registry to attempt to answer that question.

The other important part of a registry is people who may have been harmed by a particular chemical, and there is pretty good evidence that there is a preventive activity that could prevent them from developing illness. Those people should be registered and periodically notified, or we should be able to notify them of what that preventive activity should be.

I would cite, as an example of that, people who have been exposed significantly to asbestos. In my view, they should be reminded once a year or periodically that they should not smoke, because the most important preventive measure to prevent development of disease after asbestos exposure is the cessation or the not starting of smoking.

Senator LAUTENBERG. Forgive me, Dr. Houk, I am going to turn the platform back to Senator Mitchell, but I would tell you that when you offer that kind of an admonition about people who have asbestosis or who have been exposed to asbestos, that they ought to be reminded not to smoke, they are constantly aware of that exposure.

I sat with a family in New Jersey where the father worked in an asbestos factory and contracted asbestosis, gave it to his wife and a 35-year-old son, by transporting it in his clothing.

What I sense here is that maybe because you are professional and you have to disassociate the passion from the action, that we are looking at this in laboratory mode and not really getting to the urgency required for the control of these substances and the prevention of disease that is so horrible when it finally comes.

It is not accusatory. Honestly, I am trying to share with you a concern that I think that all of us here have. We have seen witnesses who bear the scars of exposure. It is terrible.

We will come back to it.

Senator MITCHELL. Thank you, Senator.

Dr. Mason, the next witness will be Dr. Ellen Silbergeld of the Environmental Defense Fund. I believe you have been provided a copy of her statement.

In that statement, she has included a chart showing the allocation of funding to the Superfund health agency by the Office of Management and Budget for fiscal year 1984. That chart indicates that the OMB allocation for fiscal year 1984 was only 10 percent of the allocation for fiscal year 1982.

I have two questions. First, do you agree with or dispute the figures contained in Dr. Silbergeld's chart? Second, would the stability and success of your program be improved if funds were made directly available to the health agency instead of being passed through EPA to your Agency?

Dr. MASON. We just saw the table this morning. As far as we can tell, the table is correct.

So the answer to your first question is yes. The answer to the second question is yes, although I do not want to infer that we are necessarily having any troubles with EPA. There have been problems in the past. I think those have been worked out with the current Administrator, and we have an excellent working relationship with staff at all levels of the EPA today. But I think it would be easier.

Senator MITCHELL. Thank you, Doctor.

It is my understanding that there are currently only about six persons assigned full time to the Superfund unit located in Atlanta, none of whom is a physician or other health professional. I ask if you would submit in writing for the record to the committee the specific grades and responsibilities of those persons.

Dr. MASON. We would be happy to do so. (See p. 758.)

Senator MITCHELL. It seems that about six persons is a relatively small number.

I have two questions. Have you requested personnel increases in the past? If so, would you now state what requests were made for each of the past 4 fiscal years, for what purposes, and what disposition was made of your request?

Dr. MASON. You would like that in writing or verbally?

Senator MITCHELL. Well, if you could give me an answer now, I would appreciate it. If you cannot answer that question, then submit it in writing.

Dr. MASON. I think we can try to reconstruct quite accurately the question you raise. While Dr. Houk is looking up that information, I would comment that it is not correct to say that only six people are involved in the work of the Agency.

Senator MITCHELL. I said about six persons assigned full time to the Superfund unit located in Atlanta.

Dr. MASON. You have to recognize that historically we began our involvement with the Superfund before we had money or people. We were trying to carry out Superfund support activities with people that had been hired for other purposes.

As we have slowly begun to acquire FTE's for Superfund activity, only six have been assigned full time doing nothing but Agency responsibilities. I can assure you, however, with the current 47 FTE's we have received, the Agency is doing more than 47 FTE's of work. Among the staff carrying out Agency work are physicians, toxicologists, and others.

Dr. Houk, could you be more specific?

Dr. HOUK. In fiscal year 1982, we requested $10 million from EPA. Our interagency agreement with them was $3,344,000. (Congress appropriated $5 million.) We had 47 positions, which they recommended that we receive. The money did not come until after the end of March, more than halfway through the fiscal year. So that year we used only 17 FTE's.

In 1983, we requested $21 million. EPA awarded HHS $9,656,000. ($1,656,000 from fiscal year 1982 appropriation plus $8 million fiscal year 1983 appropriation.) The budget that year from the Congress was $8 million in new money and 39 positions.

In fiscal year 1984 we requested $6,415,000. It was reduced from the original request because we had a fair backlog of money that we have been unable to spend yet. We requested additional FTE's. The allowed budget in fiscal year 1984 by OMB was $1.9 million and 21 FTE's. (However, the Congress appropriated $5 million to HHS Superfund activities for 1984.)

For fiscal year 1985 we have requested $18,402,000. The EPA allowance was $16,295,000. The President's budget, as you are well aware, is $9,495,000 with 47 FTE's.

I would like to say that the Department has consistently supported us with the additional 21 FTE's asked for by the Congress. Last year we had 39. We needed an additional amount this year. They were able to find us 8 more, and we have requested this year, and have appealed this year several times, up to 76.

Senator MITCHELL. Thank you very much, Dr. Houk.

Dr. Mason, there are a variety of chemicals which are widespread, including TCE, PCP, DDT, and a number of others. TCE, for example, I understand is the single most common chemical contaminant of drinking water in the United States. PCB's are also frequently found.

In order to find out more about these chemicals and their health effects, animal and other laboratory studies must be conducted. I have a series of questions.

For how many chemicals is the Superfund health agency conducting such laboratory studies?

Has the agency identified the toxic chemicals most often encountered in the environment?

Of the top 15 of such chemicals, how many are the subject of Superfund laboratory studies?

For each of them, tell us whether the agency has requested funding for such studies and, if so, whether the requests were approved or disapproved, and by whom.

Dr. HOUK. We would have to do that, Senator Mitchell, extensively in writing. (See p. 761.)

Dr. HOUK. I would like to point out that on each of the Superfund sites we do not have a complete inventory of the chemicals that are there. One of the reasons that we assigned people from our staff into the EPA regional offices was specifically for that purpose—to be able to go through the EPA files, where they happen to exist in that regional office; to work with the States if they had some additional information; and to provide us a listing of the chemicals that are in the national priority list sites, and, indeed, maybe even in other sites.

Senator MITCHELL. I thank you. We will expect the full answer in writing.

I have a number of other questions for you gentlemen, but because of the time, I may submit them in writing. Senator Lautenberg has a couple more questions for you. So I will turn it over to him before we hear from the next panel.

Senator LAUTENBERG. Thank you.

The one agency registry that has been created is the one for dioxin. I think that both of you know that dioxin contaminants are a serious problem in New Jersey. Last year EPA initiated studies at a dozen highly contaminated sites, after it was discovered that contamination in a section described as the Ironbound section of Newark surpassed the levels found at Times Beach, MO. I have a couple of questions to which I would like responses.

Are there studies of dioxin contaminants in New Jersey, in Newark specifically?

Dr. HOUK. The National Institute of Occupational Safety and Health has included the New Jersey areas under the NIOSH dioxin workers registry which Superfund is supporting, both for mortality and the morbidity studies. We are actively pursuing and trying to measure dioxin in fat. We can measure it in people's fat now.

One test costs about $6,000, we can do about 8 tests a week. It is a very extensive thing.

We are working very hard and rapidly to try to get a test developed with which we can have a successful measure of blood levels of dioxin. That probably is going to stretch technology to its limit, because the normal background level may be in the 200 or 300 parts per quadrillion. Parts per quadrillion is a millionth of a part per trillion.

One of the things that has impeded the human health studies of these compounds is being able to determine exposure. The easiest way to determine exposure is to look at a body burden. If you cannot, you have to use a surrogate of history, work force, et cetera. We believe very strongly regarding the dioxin issue that the

major effort should be put in the worker registry at this moment because the exposure was higher and more easy to determine with some degree of certainty.

Senator LAUTENBERG. How many citizens in New Jersey have been registered? Do you have any idea?

Dr. HOUK. I don't know. I can provide that. There are 6,000 in all of the sites of the dioxin registry.

Senator LAUTENBERG. OK, if you would, I would appreciate it. (See p. 762.)

Senator LAUTENBERG. How do you inform people generally that there is an opportunity to be registered, the value of registration, and so forth? What do you do? Do you use local health agencies for that?

Dr. HOUK. As we did in Missouri and with the dioxin workers registry in Missouri, in some of the nonoccupationally exposed people in Missouri, through health questionnaires of the community, asking them to come in to respond, and if we are going to do a registry, then we will ask them if they want to be part of that registry or maybe even urge them to be a part of that registry, get their consent, and periodically follow them.

Senator LAUTENBERG. Do you have any idea now how long a period of time the effects of dioxin exposure takes to manifest any health aberration?

Dr. HOUK. We have absolutely no idea in humans. We know that some malignancies take 20, 30, 40 years to develop. Some of the liver diseases may take that long with low dose exposures. Some kidney diseases may take that long with low dose exposure. One needs a large enough population group to study to be able to determine whether, in fact, there are diseases occurring as a result of specific exposure in these people or not.

As you are well aware, and I am sure that you have heard on several occasions, the issue is some people say an exposure causes a disease and other people say that it doesn't. Most of the human studies have had an insufficient number of people followed for a length of time that would not allow a perfect determination.

I could give an example, if I might. In the dioxin soft tissue sarcoma issue, the Finnish study registered 1,200 people, followed them for 12 years. One would expect in that population a tenth of a case of soft tissue sarcoma. If you had exposure that caused a tenfold increase, then that would be one case. You can't find a tenth of a death. You can't find a tenth of a case. You find one or you don't.

Senator LAUTENBERG. We will leave the technical and professional details to you.

I would appreciate it if you could provide for the record a sample of the Missouri health form that you use there and how often these forms are updated, so we can get some idea what it is that is taking place. (See p. 763.)

Senator LAUTENBERG. Thanks, Mr. Chairman.

Thank you very much.

Senator MITCHELL. Thank you both, gentlemen.

The next panel will include Ellen Silbergeld, representing the Environmental Defense Fund, and Harold Schaitberger, representing the International Association of Fire Fighters.

Please come up and take seats at the witness table.

Why don't you proceed, Ms. Silbergeld. If you could summarize your statement, we would appreciate it. The full statements of all of the witnesses will be included in the record.

STATEMENT OF ELLEN SILBERGELD, CHAIR, TOXICS PROGRAM, ENVIRONMENTAL DEFENSE FUND

Dr. SILBERGELD. Thank you very much, Senator.

I am Ellen Silbergeld, Chair of the Toxic Chemicals Program of the Environmental Defense Fund.

We are very grateful for the invitation to join these hearings, which we consider to be extremely important in your consideration of extension and reauthorization of the Superfund Act, because these hearings focus on the central issue of Superfund; that is, understanding and dealing with the effects of toxic substances and hazardous wastes on our health.

Superfund was passed 4 years ago in response to public concern and considerable scientific understanding that, indeed, our health was and could be endangered by many of the toxic and persistent industrial chemicals which were escaping into our environment. In order to prevent significant and possibly irreversible damage to our health, Congress established in the Superfund a mechanism for rapid identification and remediation of those sites which most imminently threatened the public health and welfare.

Now at that time of passage knowledge of the effects of hazardous waste was indeed limited, and our response, rightly, had to be based on the public health maxim that an ounce of prevention is worth a pound of cure. At that time, in 1980, there had been no full-scale investigations of the association between chemical exposure, human disease, and death.

The major epidemiologic resources available to both the States and the Federal Government had not been used to develop our understanding of these associations.

Now, to rectify that situation, and in recognition of this lack of knowledge, Congress authorized in Superfund the establishment of a new health agency, the Agency for Toxic Substances and Disease Registry, whose Director you have heard today.

This new Agency was to undertake the health-related activities of Superfund which included: Site-specific health studies of Americans exposed to hazardous waste; exposure registries of people from these sites, for the purposes of long-term followup; and investigations of the relationships between exposure to the toxic substances and human health.

In addition, this Agency was to oversee the specific health conditions of exposed people, providing medical care and testing of residents in Superfund communities.

Now you know that the value of these health studies, these long-term exposure registries, and these investigations of associations is very evident. When done well, they can greatly assist public policy and regulation. I cite only the recent landmark research of the National Center for Health Statistics and the Centers for Disease Control which demonstrated very powerfully the relationship between childhood lead poisoning and the use of lead in gasoline in this

country. That is, these kinds of studies can demonstrate that exposure to toxic substances can, indeed, adversely affect our health on a significant scale and, second, and possibly more important, reducing that exposure can significantly improve our health.

The use of exposure registries over the long term is also essential. Almost all we know of the toxic effects of dioxin in humans, for instance, has come from the continuing registries of the residents of Seveso, Italy, registries which have been actively maintained for almost 8 years.

Registries of this type are also critical for allowing us to apply advances in medical treatment to exposed people. For example, considerably after their exposure to the insecticide kepone, people in Hopewell, VA, were able to be located through an exposure registry for a new treatment developed at the University of Virginia which, when applied, greatly reduced their body burdens of this toxic chemical.

Complete and appropriate implementation of the health-related requirements of Superfund over the past 4 years could have provided us all with a basis for determining objectives, priorities, and funding required for reauthorization of the law to finish the cleanup process, and it could have informed decisions on the appropriate compensation of persons whose health has been damaged by hazardous-waste exposure.

Implementation of these health-related requirements by EPA and HHS could also have helped relieve the private anguish and uncertainty of those Americans who have been involuntarily exposed to hazardous wastes.

I would like to touch on the other two aspects of the health-related functions of Superfund. One is the assessment of the nature and extent of environmental damage resulting from the escape of hazardous waste. Congress rightly provided this by requiring a reporting mechanism to be established to publish a comprehensive national list of all those areas in our country where contamination by toxic substances has restricted public access and use. In addition, Congress recognized the need to increase the data base of our knowledge of our toxic substances which are particularly frequent in hazardous waste escaping from waste sites.

What we want to describe to you in this testimony is an almost complete failure of implementation of all of these functions, as a consequence specifically of what can only be called a strangulation of the Agency for Toxic Substances and Disease Registry by the cooperative efforts of the Environmental Protection Agency and the Office of Management and Budget. As a consequence, we know little more now than we did in 1980; we have little chance of using improved knowledge to formulate policy. Most importantly, we have lost and we will continue to lose people forever from the attention of medical surveillance and possible therapeutic intervention before the onset of life-threatening disease.

I would like to describe in some detail the failure in implementation of this Agency's mandate. You have already alluded to the fact that it took a lawsuit by the Environmental Defense Fund 2 years after the passage of Superfund by Congress to get this Agency established. In December 1982, we sued HHS and EPA to get the Agency in existence and to get its functions performed. In April

1983, the Government finally established the Agency and the suit was settled. I have attached a copy of the settlement agreement as appendix A to our testimony.

But, even with this explicit guidance from the court, the Agency's performance to date has been disappointing. The most important activities mandated by Congress and restated by the court are only in the preliminary stages, and most of them will be terminated or unfulfilled primarily for lack of funds.

I want to stress that as we examine the Agency's particular problems—and we have provided in appendix B a detailed review of its performance, which will list, Senator Mitchell, the answers to some of your questions as to how many sites have actually been studied, and I believe the total is about 14—it is important to keep in mind that the Agency is completely dependent for its funding upon Superfund money, and it is dependent upon access given to it to these funds by EPA and OMB. The Agency has no routine mechanism whereby congressional hearings and appropriations can supplement or override the decisions of these two agencies.

I would like to deal with this mandate point by point:

In the area of exposure registries, as you have heard, the Agency has not yet issued the document which would set up guidelines for establishing registries of persons exposed to toxic substances. No registries, as a consequence, have been started to date, although, as you have heard, there are some lists of persons exposed to dioxin in Missouri. There are no lists of persons exposed to dioxin in New Jersey. The NIOSH dioxin registry which was described relates to the occupational oversight functions of that Agency and has nothing to do with protecting citizens exposed to dioxin in the general environment.

The Agency has claimed that it must wait for the formulation of registry guidelines. This is unnecessary and means that some registries will not be done at all. This is because registries can only be set up relatively quickly after an exposure incident is identified. It is already too late to register the residents of Love Canal. They have all left. It will be too late to register people in Newark or Ironbound because they are leaving as fast as they can.

In contrast, the Italian Government began its Seveso registry of people exposed to dioxin immediately after the incident, and it has been using it productively ever since.

With respect to the mandate to conduct general health and exposure investigations, this also has not been started. More seriously, the collection of such data under the sentinel disease program for fiscal 1985 has essentially been terminated by CMB's funding decision. Of the $2.9 million the Agency requested from EPA, EPA agreed to the allocation of $2 million, but OMB cut this amount to just $250,000, less than one-tenth of the recommended budget by the Agency. Essentially nothing can be done with this amount of money. Thus, OMB's arbitrary action, in effect, terminates this activity.

Now the Agency has offered a previously existing CDC project on rare sentinel diseases and birth defects as partial fulfillment of this Superfund obligation, but this is only a part of the issue: Toxic substances and hazardous waste may cause an increase in the rate of

common as well as rare diseases and many defects aside from the few birth defects which have been slated for monitoring.

Moreover, any registry of serious diseases or even rare diseases for the purposes of Superfund must include information on residence by geographic location in order to establish the possible relationships between exposure to hazardous waste and health effects in the population on the registries.

Now I would like to deal with the site-specific health studies, which I know are of great concern to you.

Senator MITCHELL. Before you do that, Dr. Silbergeld, I want to interrupt to say that I must leave to participate in a floor debate on a matter that is coming up very shortly there. I am going to turn the meeting over to Senator Lautenberg.

Before I do, I want to commend you for what surely is a very specific and comprehensive analysis of the program. It is very useful to us in attempting to deal with it.

I also want to say that I am delighted especially to turn the meeting over to Senator Lautenberg because I want to recognize the presence in the room of two of his daughters, Lisa and Nan.

We welcome you here. You must be very proud of your father, and with very good cause. We are very proud to have him as a member of this committee, dealing with a matter, as we are today, of great interest specifically to the people of New Jersey, but also to the people of the country.

I apologize to you, Ms. Silbergeld, and to you, Mr. Schaitberger, but I have reviewed the testimony and will consider it very carefully as we proceed to deal with this matter in the committee.

Senator LAUTENBERG. Please continue.

Dr. SILBERGELD. Thank you.

With respect to the site-specific health studies, which for many people, particularly at these sites, is the most critical health-related function of Superfund, this, too, is proceeding very slowly and incompletely. To date, as you have heard from the previous witnesses, the requests for scientific support, consultation, and emergency response from outside the Agency, from EPA, have monopolized the Agency's limited resources and derailed its agenda.

For instance, from April 1 to December 31, 1983—this is all detailed in our appendix B—the Agency for Toxic Substances and Disease Registry responded to over 600 requests for health consultations, site visits, report reviews, or meeting participation. Partially as a consequence of this enormous burden on their time and resources, only three, or possibly four, site-specific epidemiologic studies have been completed since the inception of the Agency. In all of these, moreover, CDC had significant involvement long before Superfund. The preliminary results in some of these studies, such as East Helena, MT, may not be followed up, and, thus, the investment of time and money which has already been poured into these few sites may represent another loss. I will describe why that is so from a financial point of view later; 11 more such studies, as far as we can tell, are currently underway, adding up to a total of 14 or 15, but several of these were also initiated before Superfund was passed.

The ATSDR's activities related to human-health studies should be part of a framework to determine the relationships between ex-

posure to toxic substances and human disease, encompassing both the emergencies which concern EPA and nonemergencies—that is, opportunities for truly increasing our understanding. They should not be done as background for scoping specific cleanups, which is the main motivation of EPA. Health studies should use state-of-the-art methodologies and they should apply new and innovative health-screening methods in surveying programs or we will never increase our understanding of the effects of these toxic chemicals.

With respect to the health-related requirement to develop information on the effects of toxic substances, efforts have been underway in the National Library of Medicine to update, enhance, and expand existing data bases, but lack of funds has halted much of this progress.

Funds for including information on additional toxic substances were cut by EPA this year from a requested $1.4 million to just $600,000 and then further reduced to $550,000 by OMB.

Moreover, after investing over $5 million previously in the development of this data base, another $100,000 was needed for software modifications so that this Library, this information service, could be effectively available.

EPA and OMB have mindlessly deleted this small amount from the budget, thus rendering valueless the previous investment of over $5 million.

Finally, $4.5 million was requested by the Agency for the identification and testing of chemicals found at Superfund sites, which you alluded to, Senator, for which inadequate toxicological data exists. We know the scope of this problem through a recent report issued by the National Academy of Sciences on toxicity testing by its Board on Toxicology, which I am a member of.

All of this money for toxicology testing has been deleted by OMB.

With respect to the function of listing of closed——

Senator LAUTENBERG. Dr. Silbergeld, we have two other witnesses. I do not know whether you were cautioned in advance to summarize your testimony. Your full statement, of course, will be in the record. If you could summarize very quickly, it would be appreciated.

Dr. SILBERGELD. I will.

Senator LAUTENBERG. Thank you.

Dr. SILBERGELD. We have included some budget pages on page 13–A and 14–A which describe in figures what I have been alluding to in terms of what can only be called an evisceration of the financial stability of this Agency.

In addition, as you have heard, the staff of this Agency is very small. Many of its important members, two of whom were here today, also share appointments with CDC and are certainly being stretched far beyond their personal reserves.

In addition, we understand that the current allocation of full-time equivalents of 47 is going to be cut to 21.

I would like to give you, very briefly, the recommendations which we have come to in considering the scope of activities we feel Congress had in mind for the health-related requirements of Superfund.

Obviously, the Agency requires appropriate staff for its activities. We recommend authorization of the 100 positions originally requested by CDC.

Now with respect to funding, as you have heard, the current budget is somewhere between $7 and $9 million. In order to conduct these health-related activities, the Agency requires appropriate funding and stable funding.

For the site-specific health studies, skipping to page 18 of our testimony, we have recommended a budget of $22.5 million, far in excess of the $4.8 million Dr. Mason assumes he may receive from the EPA. This is based, as we have indicated in our testimony, in assuming that the Agency will undertake 15 site-specific health studies ongoing at any time, certainly not a very large number, with an average cost of $1.5 million for each study. The derivation of those numbers is shown in our text.

For maintaining long-term exposure registries, we recommend allocation of $4 million. This is based primarily on the experience with the Michigan polybrominated biphenyl registry, which I was involved with when I was at NIH, and this is a minimal followup activity costing about $100 per person per year in a population which is significantly less mobile than is characteristic of the American population, as Dr. Houk mentioned.

Now if we assume that it is reasonable for the Agency to establish such long-term exposure registries at each site which is identified for priority action by EPA or is mandated on a schedule by Congress for cleanup, then we would assume approximately 100 to 200 such sites would require the establishment of exposure registries. This works out to a total annual cost of between $2 and $4 million per year.

For the investigations and disease registries, we recommend funding at a level of $30 million. This is clearly one of the most important activities this Agency can undertake.

For its other functions, the information function and the reporting of restrictions on sites, there is also a requirement for personnel and funding. We cannot recommend a funding level for the reporting on restricted sites because that function has not been initiated and we do not know what resources it will take at the present time. Funding for the information system, as we have noted, has been highly erratic, going from $5 million to zero. Such data bases, with the previous investment, are useless if they are not continually updated and maintained, and they will be effectively useless if no one has access to them.

We recommend stable funding of about $1 to $2 million per year. Some of these funds may, indeed, be recaptured by subscription and user fees, if this service is indeed made available.

Finally, we believe that some revisions to the legislative language of Superfund would be useful. Our experience with the Government's attempts to implement Superfund's health-related requirements, including the necessity for legal action, over the last 3½ years shows that the Agency's efforts have not been focused on the proper areas and types of activities.

Moreover, EPA, and especially OMB, have felt free to ignore the mandate of the statute in deleting needed funds. We believe that both these problems could be alleviated if the language of Super-

fund section 104(i), as the law currently stands, were clarified to specify the Agency's responsibilities in more detail and in insuring proper funding and long-term stability.

We would be pleased to supply specific legislative language in accomplishing this goal and to answer any of your questions.

Senator LAUTENBERG. Thank you, Dr. Silbergeld. I am sorry that you felt rushed a little bit. Your testimony is very valuable, but we do want to hear the next witness.

Senator BAUCUS. With the chairman's indulgence, could I just ask one very quick question here?

Senator LAUTENBERG. Sure. Senator Baucus.

Senator BAUCUS. Thank you, Mr. Chairman.

Ms. Silbergeld, you point out that OMB has recommended a reduction of $500,000 for site-specific protocols. I wonder if you could describe what the effect will be not only of that, but also on the East Helena lead study?

Dr. SILBERGELD. Specifically, with a funding level of a little over $800,000, based on the average cost of the health study we have developed of over $1 million, it is hard to see how any health study at any site will be accomplished.

With relation to East Helena, MT, a tremendous amount of resources have already been put into this study.

Senator BAUCUS. How far along is that study?

Dr. SILBERGELD. I believe that study is almost completed and requires some analysis of tissue and environmental samples of lead, and perhaps some additional studies of some of the children involved in this exposure.

Senator BAUCUS. You are saying that if the OMB numbers go into effect, essentially even the East Helena study will not be completed?

Dr. SILBERGELD. Yes, Senator. We are concerned that all of the studies listed in our appendix will not be completed because of this kind of cut.

Senator BAUCUS. What kind of information would that study give, if it is completed?

Dr. SILBERGELD. That study will give some very important information on the role of lead in dust and soils, which is very prominent in smelter communities as well as in many of our cities, on children's health.

More than that, it will give information which we really do not have at all, which is just how does a toxic substance in soil reach people. How much soil do small children actually eat? What kind of effect could any substance in soil, including dioxin in some of the New Jersey and Missouri sites, have on small children?

Senator BAUCUS. Do you think that those results, then, would greatly aid or somewhat aid decisionmakers in trying to decide what to do about it?

Dr. SILBERGELD. It would greatly aid.

Senator BAUCUS. One final question: Why do you think it will greatly aid?

Dr. SILBERGELD. Because without real information on the true health effects of environmental exposures as distinct from occupational exposures, we really cannot assess to what extent we should be remediating these sites to prevent disease. There are children in

East Helena who already have lead poisoning. Their contribution now, and the obligation we owe to them, is to use their personal tragedies to prevent others.

Senator BAUCUS. I want to thank you very much.

My amateur view is one of agreement. My sense is that we should do a lot more, and your testimony helps us very much to document that.

Thank you.

Senator LAUTENBERG. Thank you, Senator Baucus.

Mr. Schaitberger.

STATEMENT OF HAROLD SCHAITBERGER, DIRECTOR, LEGISLATIVE DEPARTMENT, INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS, ACCOMPANIED BY RICHARD DUFFY, OCCUPATIONAL SAFETY AND HEALTH COORDINATOR

Mr. SCHAITBERGER. Thank you, Mr. Chairman.

We have prepared a detailed statement. With your permission, I understand it will be entered into the record. I will summarize and highlight the points we have made in the statement.

I have accompanying me today Richard Duffy, our occupational safety and health coordinator and industrial hygienist with our international union.

On behalf of the IAFF, we appreciate the opportunity to be able to appear before you today.

When a fire destroys a residential home or an industrial factory, it represents a work environment that closely resembles, at first glance, what firefighters faced several hundred years ago. However, technology has created a distinct difference in the modern fire environment: polyvinylchloride, polychlorinated biphenyls, acrylic, phenol, polystyrene, and urea-formaldehyde, to name just a few select. What are these new strange sounding chemicals? They are commonplace ingredients in our environment as components of household furniture, plastic pipes, buildings, wall coverings, automobiles, buses, airplanes, transformers, and coverings for electrical and other insulation materials.

The rapid proliferation of these chemicals in our society has caught the scientific community off guard. There are simply too many new chemicals and too few funds to research all of their potential hazards.

Our firefighters' natural instinct is to respond to the scene and work immediately to save lives and reduce property damage, with little regard to the potential hazards that they may face themselves. The following examples illustrate the plight associated with our professional:

In April 1980, a fire broke out at a chemical dumpsite in Elizabeth, NJ. Firefighters fought the fire for 11 hours and remained on the scene for days, mostly without respiratory protective equipment because none was available.

The IAFF immediately requested the National Institute for Occupational Safety and Health to conduct a health-hazard evaluation and they responded. NIOSH found that a high percentage of firefighters were experiencing some adverse symptoms at the time of their medical screening, 7 to 10 days after the fire. However, the

full effects of this fire are still unknown. The possibility of chronic diseases developing has caused NIOSH to undertake a long-term evaluation of the Elizabeth firefighters.

I would like to make available to the committee the Elizabeth health-hazard evaluation which was conducted.

[Received for committee files.]

Mr. SCHAITBERGER. Besides the obvious implications of the NIOSH health-hazard evaluation are two glaring examples of the lack of proper protective equipment and training for firefighters that occurred in Elizabeth, NJ.

The first example is illustrated in a picture taken of a firefighter rowing a boat with a Federal inspector onboard. If I may, Mr. Chairman, if I could have Mr. Duffy just provide to you photos of this. [See p. 876.]

Mr. SCHAITBERGER. In this picture you will see that the firefighter is wearing his normal clothing while the Federal worker that he is rowing is protected by an elaborate chemical protective suit. Obviously, no further explanation is needed.

The second example also occurred after the fire when the firefighters took the hose used in that situation back to the station and began cleaning it. The substances on the hose were draining by a mobile van that acted as headquarters for the U.S. Environmental Protection Agency and Coast Guard until the IAFF staff person pointed out that the hose contained the same toxic chemicals that were present at the dumpsite.

In April 1980, Somerville, MA, firefighters were at the scene when a railroad switcher engine moving 38 cars collided with a tankcar. Unaware of the need for special protection, firefighters assumed their normal turnout gear provided sufficient protection. After this incident, the National Transportation Safety Board issued a report citing the problems caused when the Federal Government, the shipper, and others provided guidelines and technical advice that were inadequate, inconsistent, and confusing.

In June 1983, firefighters responded to a fire at Liquid Disposal, Inc., in Shelby Township, MI. IAFF staff at the scene was surprised when someone, who identified himself as an EPA toxicologist advised the firefighters that medical exams were not required and that protective clothing and equipment contaminated with PCB-containing waste oil could be decontaminated by normal washing.

As a result of this incident, EPA is in the process of establishing standard operating procedures for firefighters responding to incidents at Superfund sites. While we are pleased with EPA's responsiveness to firefighters responding to emergencies at Superfund sites, there are many other times that firefighters must confront similar situations without the recourse of assistance from Superfund.

I would like to provide also to the committee a copy of the letter from the EPA concerning that situation. [See p. 877.]

Mr. SCHAITBERGER. In too many instances, firefighters are simply unaware that the protective clothing they are wearing is even contaminated. In other cases, municipalities cannot afford to replace the contaminated clothing.

Another problem is the toxic nature of combustion byproducts. For example, there have been several fires involving polychlorinat-

ed biphenyls, PCB's, in San Francisco, CA; Jacksonville, FL; and Madison, OH; in which our union and NIOSH have initiated action to evaluate the health hazards posed to firefighters. The documentation resulting from these fires and other incidents raise an interesting problem that has not been adequately addressed. That is, at high temperature, PCB's form other extremely hazardous substances such as dioxins and furans.

Unfortunately, we are unaware of the combustion byproducts of the majority of the other materials entering the marketplace every hour at an astounding rate. In some cases, the burning of a what is assumed to be a material with little or no health hazard may be creating new and extremely toxic substances.

Hazardous materials incidents present firefighters with a wide variety of hazards markedly different from those encountered at a structural fire. Exposure to many hazardous materials requires the use of specialized protective clothing. However, firefighters are usually responding in clothing designed for structural firefighting.

Finally, firefighters are frequently inadequately treated in hospital emergency rooms because of lack of knowledge of the type of toxic substances they have been exposed to. Obviously, knowing the type of toxic or hazardous substance can not only avoid a firefighter entering an environment without proper protective gear, but possibly save his life through proper medical examination and care.

These incidents point out the need for extensive research to be performed in the area of developing chemical protective clothing, decontamination procedures, combustion byproducts, and acute and chronic medical surveillance programs for firefighters. Obviously, the IAFF strongly supports the Superfund legislation and, for the sake of our members' health, we hope that appropriate and adequate appropriations continue.

I would like to conclude by expressing our concern over the bureaucratic infighting that has delayed research from being conducted. As is apparent from the preceding examples, the work of NIOSH has been invaluable to the fire service in identifying occupational health hazards. Based on our experience, we believe that the Department of Health and Human Services should be provided with a direct line-item authorization and appropriation to receive funds to conduct Superfund-sponsored research.

With that summarization, we would like to thank you again for the opportunity and would attempt to answer any questions you may have.

Senator LAUTENBERG. Thank you very much.

Both of you have provided, with your colleague, Mr. Duffy, and you, Dr. Silbergeld, very important testimony.

I think each of you saw from my questioning of the previous witnesses a sense of my frustration on my part about the lack of urgency with which they involve themselves. I appreciate the fact that you have confirmed some of my misgivings.

We have a few minutes. I would like to ask you some questions. There is a vote scheduled on the floor. Until such time as the bell goes off, we can continue our discussion here. Any questions left unasked will be submitted to you in writing, and we would ask for an answer. We will take whatever testimony you want to present as part of the record.

I guess, Dr. Silbergeld, it is pretty apparent from your comments that you do not share the views of Drs. Mason and Houk about the fact that things are going along OK. It is obvious that there is a lot of foot-dragging, wouldn't you say?

Dr. SILBERGELD. I think, Senator, it is impossible to see how, with the best intentions and longest hours in the world, that Agency could come anywhere near to accomplishing the mandate of Congress with the resources it has.

Senator LAUTENBERG. Not only is there a significant lack of resources, but, I think, whatever resources are available do not get full use, anyway. That is discouraging. All you have to do is see some of the people who have been victimized by exposure to some of these chemical materials——

Dr. SILBERGELD. Senator, could I respond to that?

Senator LAUTENBERG. Please.

Dr. SILBERGELD. The current arrangement is such that the ATSDR's hands are really tied. They cannot really go and respond directly to the concerns of citizens, as you have just alluded to. They must go through EPA. To receive authorization and funding to conduct any of these studies, they have to go to EPA. Now EPA's main interest in health studies is not to assure citizens or to provide people with information on their personal health, but to provide information for the Agency in determining fund-balanced, cost-effective, remedial actions. I think that is an effort which is at variance, or at least distinct, from protecting the Nation's health.

Senator LAUTENBERG. Except that it is my understanding that a mandate was developed in the 1980 legislation to do this registration, to study the consequences of exposure. I have a very deep interest in this area. We in New Jersey have an abundance of toxic waste dumpsites.

In the course of my service with this committee we have seen the results of exposure to these chemicals and fear for those people in terms of what their offspring might suffer as a result of their parents' exposure to hazardous waste and chemicals.

We have to get on with this job. I am pleased that we are beginning to see some movement in the area of reauthorization of higher funding levels. It is just sweeping the country. There is hardly a Senator in any State that does not have some degree of exposure to hazardous waste in his or her community or who is not going to have to answer to the people who vote there. That is why suddenly you see changes not only in votes out of committee, but sentiment on the floor. There is no longer the obstruction, the tactic, that we used to see.

I do want to say to you and your associates in the Fire Fighters Association that we commend the bravery of the people who, as you describe, respond to the call to duty without first doing the analysis. If you did, in the way ATSDR analyzes it, projects before you got onto fighting the fire, we would be living in a totally burned-out society.

It is our responsibility as a community, as legislators, to give you adequate protection.

That picture is so dramatic. Here's the guy from EPA all clothed in white protective garments and your fellow rowing the boat just wearing his uniform. We ought to talk to him. He ought to have an

adequate suit, and everybody else should be taken care of just as well.

I want to ask you a question, Dr. Silbergeld. Do you have any reaction to the statements by the CMA, the chemical manufacturers' testimony before the House earlier this year to the effect that it would be precipitous, and I quote:

> For Congress to enact new Federal administrative entitlement schemes in the absence of reliable information linking waste sites to widespread harm.

Further, I give you another quote:

> We do believe, however, that all of us would benefit from more information on the issue of possible waste site disease relationships and we're taking steps to get this information.

I guess your response is almost apparent. Please do, though, for the record.

Dr. SILBERGELD. CMA and EDF will be jointly cosponsoring a symposium at the American Association for the Advancement of Science meetings in New York tomorrow on the health effects of hazardous wastes. So we do share a concern to get the best information we possibly can on the general subject of toxic substance exposure and human health.

But, more than that—and this is where I think we part ways very significantly and where we have very great concerns over what is going on in Atlanta—we think that persons who can reasonably be expected to have been exposed, and this is the language of the settlement of the court, those persons should be enrolled in an exposure registry. Then, at such time in the future as we fully understand what deleterious effects have occurred to their health and we can detect them, we will be able to determine how best we can compensate them. That is the philosophy that the Senate has urged with respect to agent orange, the philosophy which underlies the asbestos registry, and we feel it must be applied to anybody who is exposed to toxic chemicals.

Senator LAUTENBERG. In Jackson Township, NJ, a county judge recently awarded $15 million to 97 families for their pain and suffering. Their drinking water had been contaminated with cancer-causing chemicals. The case is considered a great victory for the residents of the community. However, problems still remain. The bulk of their settlement money is tied up pending the outcome of an appeal and could be tied up for months, and maybe longer.

I guess this is pretty common, isn't it? Once these things are awarded, there is still no completion of the transaction.

Dr. SILBERGELD. That is very true. Even in cases where there is a settlement by all parties, as with the agent orange litigation, which I was involved in as an expert witness for the veterans, there is still the need to determine what diseases can be associated with specific chemical exposure, and that is certainly one of the very high priorities of this Agency, to make those determinations. They will be unable to do so with the funds for that particular effort, the long-term, general investigations, having been completely eliminated by OMB.

Senator LAUTENBERG. I would like to ask a question of Mr. Schaitberger.

Could you give us an idea of what a firefighter ought to know about a chemical fire before jumping in there? What can we do——

Mr. SCHAITBERGER. Let me allow my associate a little time on the record. I will allow him to answer that question.

Senator LAUTENBERG. Sure.

Mr. DUFFY. In reference to Superfund sites?

Senator LAUTENBERG. Chemical fires altogether.

Mr. DUFFY. I can relate my answer back to an experience in Elizabeth, NJ. The State had full control over that site for a year prior to the fire. During that time they removed 10,000 of the 55,000 55-gallon drums from the scene, many highly toxic, some biological wastes, some radioactive wastes, during this time. At no time was the fire department told or trained for an emergency at the site, even though they kept around-the-clock watch waiting for a fire to occur. They were not told what protective equipment would or should be worn. They were not told what suppression activities should be initiated. They were not told why or should they stay back from the fire. That fire occurred, and obviously, we are looking at the consequences right now.

Firefighters need to know—more research needs to be done in protective clothing. We have events all over the country, one out in Benetia, CA, a few months ago where there was an exposure which actually melted a $1,500 protective suit on two individuals responding to it, even though the instructions and the information with the suit said it was OK for this chemical. That type of research needs to be done, and also considerable more research on the occupational health problems of firefighters.

Senator LAUTENBERG. Do they do things such as pulmonary tests because of chemical inhalation exposure? Are these things done frequently, just as a health support measure?

Mr. DUFFY. The only time they have been typically conducted for firefighters is after we intervened after specific instances similar to the one in Elizabeth, NJ. We have done 50 of those so far in the past 4 years. Typically, pulmonary function tests are not a test that is conducted by fire departments. They will be.

Senator LAUTENBERG. If this registry gets proper support and proper action, I think there is a group here within your organization that ought to be registered as having been exposed to many of these things. It would be of benefit to the individuals, as well as a benefit to the whole society to learn about the exposure that they have had to these chemicals.

We are going to have to conclude this hearing. Again, I thank you both for your important testimony. We will submit further questions to you and invite you to submit for the record anything that you think is relevant. Thank you very, very much.

[Whereupon, at 12:10 p.m., the committee recessed, subject to the call of the Chair.]

[Statements submitted for the record follow:]

STATEMENT

OF

JAMES O. MASON, M.D., Dr.P.H.

ADMINISTRATOR

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

PUBLIC HEALTH SERVICE

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mr. Chairman and Members of the Committee:

I am pleased to have this opportunity to discuss the Department of Health and Human Services' (HHS's) progress in implementing the health activities under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, or as it is more often called, the Superfund legislation.

I have with me today Dr. Vernon N. Houk, Assistant Administrator of the Agency for Toxic Substances and Disease Registry, and Director of the Centers for Disease Control's (CDC's) Center for Environmental Health.

Under Superfund, the Agency coordinates provision of emergency consultations and health hazard assessments to the Environmental Protection Agency and the various States at toxic spills and toxic waste disposal sites. We also provide testing, conduct health studies, and will establish registries where indicated. We carry out these same activities at Superfund remedial sites. In all instances our purpose is twofold: to respond to the immediate need of protecting the public health (both of the surrounding community residents and of workers at the site) and to add to the scientific information through surveys, testing, registries, studies, and other means in order to make more specific public health recommendations in the future. I will describe these and other activities in more detail.

First, I will discuss our Superfund efforts (1) in the context of what we know about the effects of toxic chemicals on humans and (2) then in the context of other HHS programs.

To those who have to assess health hazards or risks resulting from exposure to toxic substances, the available body of scientific knowledge on human health is for most substances inadequate and nonexistent for many. This lack of knowledge is especially acute when used to asses he health effects of long-term, low-level exposures. Therefore, while we a making the best possible judgments based on the data now available for current situations, we must continue working very hard to obtain new data to improve the ability to make public health judgments and recommendations.

The work conducted under Superfund is no different from work the PHS does under other authorities with different funding sources. The National Institute of Environmental Health Sciences (NIEHS) of the National Institutes of Health (NIH) and the National Toxicology Program (NTP) are heavily involved in animal toxicological testing. The Food and Drug Administration is concerned with adulteration by toxic chemicals of foods or other products it regulates. At CDC, the National Institute for Occupational Safety and Health (NIOSH) is: (1) concerned with toxic exposures of workers, (2) involved in determining what the exposures are and how they affect workers, and (3) involved in the design of worker protection methods. And, again at the Centers for Disease Control, the Center for Environmental Health conducts a broad range of nonoccupational

environmental programs including those relating to non-Superfund toxic substance exposures. One very important program being carried out by CDC consists of studies of the effects of dioxin exposure on Vietnam Veterans. The results of the first of these, the Vietnam Veterans' birth defects study, are expected to be completed in a few weeks. All of these and many of the other activities of HHS interrelate with and enhance the work we do under Superfund.

Now, I will use the health-related provisions listed in section 104(i) of the current law as an outline and review with you what we have done and plan to do. I will also refer to worker safety activities carried out by NIOSH under section 301(f) and 111(c)(6) and health consultations and assessments by HHS under section 104(b) and Executive Order 12316, which delegated these functions to HHS.

The Agency for Toxic Substances and Disease Registry Established (CERCLA, Section 104(i))

The creation of the Agency for Toxic Substances and Disease Registry, (ATSDR) mandated by Public Law 96-510, was announced in the Federal Register by Secretary Heckler on April 25, 1983. The Agency coordinates all HHS activities under Superfund and serves as the focal point for coordinating health activities with the Environmental Protection Agency (EPA) and with all other Federal agencies involved in the Superfund program. Through the coordinative efforts of ATSDR, and with the strong

support from the other participating components of the Public Health Service (including CDC, National Library of Medicine of the National Institutes of Health, National Toxicology Program, Food and Drug Administration, National Institute of Environmental Health Sciences, National Center for Health Statistics, and Alcohol, Drug Abuse, and Mental Health Administration) we have, since we last testified almost two years ago before this Committee, greatly increased our Superfund public health activities.

Registries (CERCLA, Section 104(i)(1))

The proper use of registries is a very complex issue. We have identified four main areas of concern:

- What definition of exposure should be used to set guidelines for eligibility for inclusion in a registry?

- To what extent are people willing to participate over the course of a lifetime in active followup registries--a constant, stressful reminder of the fact that they were exposed to a toxic substance?

- How can we assure that a commitment made today to establish and maintain a registry will be carried through over a period of 10, 20, 30, or 40 years?

- What level of followup is necessary, scientifically, to provide estimates of risk which can then be used to make sound decisions on how to manage those risks?

A PHS group has worked vigorously to define the circumstances under which establishing registries is scientifically useful or would benefit exposed individuals. A draft position paper has undergone peer review, and we expect to have this document available early next week.

Several related activities are occurring. We have established a central list of individuals exposed to dioxin in Missouri. In addition, major efforts are underway to develop two surveillance systems which deal with toxic exposure, one of adverse reproductive outcomes and the other of sentinel diseases/conditions. As used here, a sentinel disease/condition is an adverse health event which alerts us to the possibility of toxic exposure.

Another very important related activity is the consideration and implementation of uniform methods for collecting information on serious diseases and mortality and on human exposure to toxic substances. A PHS committee has studied this in depth and made a series of recommendations that include the following:

- Development of guidelines for measuring body burdens of toxic substances, laboratory analyses, quality assurance, and quality control, for coordinating laboratories performing such analyses.

- Training for all persons recording and processing information on death certificates and other vital statistics.

- Linkage of birth and death certificates for infants at the State and national level.

- Development of methods to link health and exposure information with death certificates through the National Death Index.

Priorities have been established for the recommendations, and we are now working on plans for their implementation.

INVENTORY OF LITERATURE, RESEARCH, AND STUDIES (CERCLA, Section 104(i)(2))

The National Library of Medicine (NLM), based on the recommendations of a group of PHS scientists (Hazardous Wastes Information and Evaluation Subcommittee (HWIES) of the Committee To Coordinate Environmental and Related Programs (CCERP)), has developed from the literature new data records for 746 chemicals and has updated the information for another 23. In addition, NLM is making its data systems easier to use and simplifying the information format and the data entry and retrieval processes.

LISTING OF CLOSED OR RESTRICTED AREAS (CERCLA, Section 104(i)(3))

Over a year ago we initiated work, including review of EPA files and gathering information from State Health Departments, to develop a list of closed or restricted sites. On the basis of these reviews, we found that data relating to areas closed or restricted because of toxic contamination are not routinely collected by State or local agencies. The data we collected therefore resulted in a very incomplete listing. We are now in the final stages of awarding a contract to the National Governors' Association to design and implement a data collection system in conjunction with all States and territories to gather this information and maintain it on both the State and national levels.

PROVIDE MEDICAL CARE, TESTING, OTHER ASSISTANCE IN EMERGENCIES (CERCLA, Section 104(i)(4))

I will now discuss the medical care and testing provision of the law at emergency sites and your question with regard to what mechanism, if any, has been established to assure that citizens with complaints of ill health are able to obtain diagnostic and other health assistance.

We have not developed a separate mechanism to accomplish this, but we do conduct some testing in cooperation with State and local health authorities. We also provide consultations to physicians and hospitals in the treatment of exposed patients. Existing health service delivery systems, together with the consultations we provide, are felt to be

adequate for dealing with the need for health services. A significant complicating factor is the difficulty in associating exposure to toxic chemcials with specific medical conditions.

The numbers of health consultations we have provided to EPA, State Health Departments, and others in emergency situations--including what EPA defines as immediate removal sites--have increased during the past 2 years. For example, in Fiscal Year 1982 we provided 12 such health consultstions. In Fiscal Year 1983 the number of these consultations rose to 358. Our FY 1984 projection is 650 consultations in emergency situations and at immediate removal sites. (Attachment 1) These consultations range from providing information from our data bases on the known health effects of the substances involved to providing consultation to hospital emergency room physicians on the appropriate testing and treatment of exposed individuals.

When appropriate and necessary, PHS has worked with State Health Departments to collect biological samples and test them to determine levels of exposure in community residents. Three examples of CDC's laboratory testing to determine the extent of human exposure in emergency situations are as follows:

- LUDOWICI, GEORGIA: In March of 1982, a train accident in Ludowici, Georgia, occurred. During cleanup operations, it was discovered that the train's cargo contained an unknown quantity of phenyl mercury acetate. The cleanup crews included nearly 200 firemen, policemen, postal service employees, and army personnel. A team of health workers collected urine samples from 179 persons presumed to have been exposed. Fortunately, no excess levels of mercury were found.

- FORT SMITH, ARKANSAS: In October 1982, the State of Arkansas reported to EPA its finding of a residential site containing high levels of polychlorinated biphenyls (PCB's). CDC worked with the State Health Department in assessing the potential health hazard from this site and recommended immediate action to limit the possibility of human contact, particularly children, with contaminated soils. Concurrently, blood samples from nearby residents were collected and analyzed for PCB contamination. Fortunately no excess levels were discovered. The State moved quickly to prevent future human exposure by fencing off this site and clearing away contaminated soil.

- JACKSONVILLE, FLORIDA: This past January a PCB transformer fire in Jacksonville, Florida, was thought to have potentially exposed residents in a nearby subdivision. CDC, working with State and local health officials informed residents how to avoid additional contact with the PCB run-off from the fire and offered to conduct

blood tests on any individuals who thought they might have been exposed. Of the ten tested, none was found to have significantly elevated levels of PCB's.

In another instance, routine testing of blood lead levels by the State of Pennsylvania provided us with information which led EPA to take immediate cleanup action at the Brown's Battery Breaking site. Because we had data to show that actual ingestion of lead was occurring, EPA moved quickly to remove the families from the site and began immediate cleanup action.

We have initiated testing at a number of other sites, either in conjunction with pilot health studies or as a part of a communitywide health study.

In addition to using existing testing methodology, staff members of the Center for Environmental Health are developing new tests for assessing the damage done from exposure to toxic substances to two key target organs of the body--the liver and the kidney. They are in the preliminary stages of developing new methodologies to assess the damage from toxic exposure to genetic material, the immune system, and the neurologic system. In addition, this staff has made important strides in assessing the body burdens of PCB's and in developing new methods for measuring the body burdens of dioxins and furans in both human fat and blood.

The law's current requirement for the provision of testing to all exposed individuals, "including but not limited to tissue sampling, chromosomal testing," is medically and scientifically inappropriate because these existing tests are applicable and useful in only a limited number of circumstances. In many instances existing tests do not provide useful information. Existing mechanisms are adequate to provide for testing of exposed individuals when appropriate tests exist.

SURVEYS AND STUDIES TO DETERMINE RELATIONSHIP OF EXPOSURE TO ILLNESS (CERCLA, Section 104(i)(5)

With regard to general progress toward defining the nature and extent of the ill-health burden in the United States which may be attributed to hazardous substances, most of the health activities carried out under Superfund contribute to the information needed for assessing such a burden.

Over the past decade, scientists have expended many millions of public and private research dollars in an effort to investigate and understand the complex relationships between human health and exposure to suspected environmental pollutants. The basic tools for this ongoing search are laboratory studies in animals and epidemiologic studies involving humans. Properly done, animal experiments and epidemiologic studies provide a basis for identifying associations between various human health risks and environmental factors, from which public health and environmental protection policies are developed to minimize the risks to current and future populations.

We are committed to using these tools to demonstrate the links where they exist. Many of the epidemiologic tools, however, unless impeccably used with large enough populations, will yield inconclusive results--neither positive nor negative. It is very tempting for some to use inconclusive results that tend toward the negative as definitely negative results; it is equally tempting for some to use inconclusive results which tend toward the positive as unequivocally positive results. Either of these actions is incorrect and unfortunate, and we must be alert to recognize when results are, in fact, inconclusive.

Greater knowledge of the added health burden from exposure to toxic substances on the U. S. population will emerge over the long term with proper interpretation of cumulative results of animal and human health studies.

As mentioned earlier, one of the cornerstones of our Superfund program is our effort to expand what we know about the health effects of toxic substances found in abandoned waste sites or commonly involved in toxic fires or spills. With this knowledge the most appropriate preventive measures can be taken. To do this, a group of scientists from throughout the Public Health Service has evaluated the data currently available on the toxicity of the chemicals EPA has found at high-priority waste disposal sites.

The National Toxicology Program (NTP) has taken the list of substances needing additional research generated by this group and has determined the appropriate toxicological testing required. So far, on the basis of the review described above, NTP has identified 24 chemicals or classes of chemicals requiring additional testing and has already begun testing 6 of those with highest priority. The 6 are:

- hexachloro-1,3-budadiene (HCBD);
- trichloroethylene;
- chlorobenzene;
- toluene;
- phthalates;
- ethylbenzene.

Another major effort to expand what is known about the health effects of toxic substances is to conduct epidemiological studies on populations presumed to have been exposed. The Center for Environmental Health staff has developed a standardized four-step approach to site-specific health studies. The first step is to assess the potential health hazard of a site on the basis of the results of environmental sampling. If the potential for a serious health hazard is deemed to exist, then the second step is to conduct a pilot health study of a group of those people identified as being the most highly exposed. If the pilot study validates excess exposure, the third step is to conduct a health study of the entire potentially affected population. The fourth step is to establish a registry of exposed individuals for extended followup when scientifically justified and feasible.

As part of our health consultations to EPA, we have conducted about 100 health assessments. We have also conducted several pilot health studies to assess exposures to PCB's in Bloomington, Indiana; Ashtabula, Ohio; Norwood, Massachusetts; and Jessup, Georgia; exposures to benzene in Perdido, Alabama; and exposure to mercury in Ludowici, Georgia. Major communitywide health studies have been conducted to assess the health effects of lead exposure at Superfund sites in Idaho and Montana and dioxin exposure in Missouri. Additional major studies are being developed under separate interagency agreements to assess PCB exposure in New Bedford, Massachusetts, and to study morbidity and mortality among workers included in the NIOSH dioxin registry. A protocol has been completed and reviewed for a study of the community living near the Hollywood dump site in Memphis, Tennessee. Other studies being developed include assessing arsenic exposure in the Commencement Bay site in Tacoma, Washington; trichloroethylene (TCE) exposure in Battle Creek, Michigan; and dioxin exposure in additional locations in Missouri. Finally, we are also developing a study of excess bladder cancer in community residents and in former workers at the Drake Chemical site in Pennsylvania.

I have attached a table detailing the health studies we have completed, those underway, and those under development. (Attachment 2).

The provision of the law mandating treatment of exposed individuals in PHS hospitals and other facilities can no longer be implemented because under other legislation these facilities have been closed.

WORKER SAFETY AND HEALTH PROTECTION (CERCLA, Sections 311(f) and 111(c)(6))

Sections 301(f) and 111(c)(6) of the Superfund legislation provide for the National Institute for Occupational Safety and Health (NIOSH) to be an active participant in the protection of workers at toxic emergency sites and in the cleanup of hazardous waste sites.

To fulfill this mandate, NIOSH has undertaken a number of projects to determine whether worker protective gear--clothing and respirators, worn by cleanup crews--actually protects workers under field conditions. NIOSH is also taking the lead in disseminating worker safety information through training courses for State and local health and other government officials and through the development of a guidance manual on the protection of workers at sites. This manual will be completed this year.

ASSESSMENTS OF HEALTH HAZARD AND RELATIONSHIP WITH EPA (CERCLA, Section 104(b))

All of the information mentioned above--that currently available for the National Library of Medicine's data systems, or that newly acquired from toxicological testing or from epidemiological studies--is combined with the experience of epidemiologists, chemists, occupational physicians, toxicologists, and others and applied to specific Superfund sites. This enables us to make the best medical and scientific judgments on the degree

of hazard, if any, posed to the surrounding community or to workers at those sites. These health assessments are primarily conducted by the staff of CDC's Center for Environmental Health, with assistance from NIOSH on worker health issues and from the Food and Drug Administration when there is a potential for adulteration of foods and other FDA regulated products. Usually, HHS gets involved at specific sites at the request of EPA, but can also be asked for assistance by a State or can directly initiate action on its own.

These health assessments have become an integral part of the EPA process for evaluating the severity of health hazards posed by a given site. A wide range of activities lead up to our being able to make such a health assessment for EPA, and after the assessment is made, to our either reassuring community residents that no known health hazard exists or explaining any potential health problems. Our work often includes site visits, advice on needed sampling and quality assurance/quality control procedures, review of EPA sampling data and cleanup alternatives, issuance of a public health advisory or health assessment, review of site safety plans, and participation in community meetings. This day-to-day interaction with EPA was greatly enhanced when CDC public health advisors were assigned to the EPA regional offices.

As a result of the overall increased interaction, the number of "consultations/assistance" provided by HHS to EPA has dramatically increased from the 87 consultations on remedial sites done in Fiscal Year 1982. In Fiscal Year 1983 we provided 781 consultations on remedial sites. For Fiscal Year 1984 we project a total of 950 consultations at remedial sites.

BUDGET AND PERSONNEL (FTE's)

The Agency's operating budget for Fiscal Year 1984 is approximately $7.5 million, with 47 full-time equivalents (FTE's) allocated to carry out these activities. This amount includes $5 million in new authority and $2.5 million from unobligated 1983 funds. I should point out that these amounts do not include funding for implementing health studies. Additional funds are awarded by EPA for studies under separate interagency agreements; they currently total $1,115,000 for studies of dioxin exposure in Missouri and lead exposure in Montana and Idaho. EPA has set aside $4.8 million for special health studies this fiscal year. We expect to complete protocols, sign interagency agreements with EPA, and establish cooperative agreements with States for studies which will obligate the $4.8 million by the end of this fiscal year.

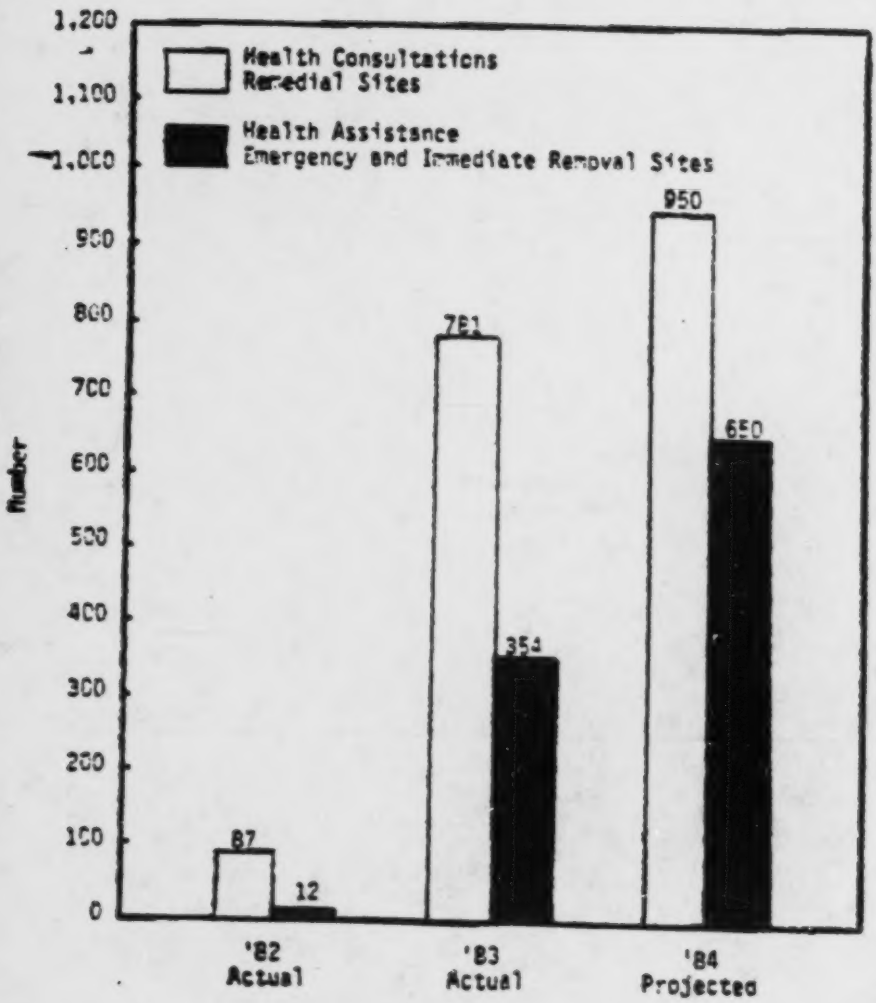
As we continue to carry out the activities described above, we will add to our knowledge of the human health effects of exposure to toxic substances and will be in a better position to improve the prevention and control strategies required to protect and improve the health of the citizens of this country. Our ability to do this will continually improve, although

it will take many years to determine the associations between exposure to some toxic substances and the resulting adverse health outcomes. We are committed to the task. In the meantime, prudent public health practice dictates that decisions be made based on the best available scientific data.

I will be happy to answer any questions you might have.

Attachment 1.

HHS Superfund Activities



ATTACHMENT 2

I. EPIDEMIOLOGIC STUDIES

	Completed	Ongoing	Under Development
Pilot studies	Ft. Smith, AR (PCB's) Bloomington, IN (PCB's) Ashtabula, OH (PCB's) Norwood, MA (PCB's) Jessup, GA (PCB's) Perdedo, AL (Benzene) Ludowici, GA (mercury)		
Community Wide Studies	Kellogg, ID (lead)* East Helena, MT (lead)* Missouri-Multiple sites (dioxin)*	Final Report Pending Final Report Pending Missouri	Missouri New Bedford, MA (PCB's) Tacoma, WA (arsenic) Battle Creek, MI (TCE) Oak Ridge, TN (mercury) Hollywood (Memphis), TN Drake Chemical Co., PA Gray, ME (TCE)

II. HEALTH SURVEYS

Surveillance Systems			
Sentinel Diseases (toxic exposures)		National	
Adverse Reproductive Outcomes		Georgia Tennessee	South Carolina Missouri

*Data collection completed

Question #1: "What have you done? At how many sites have you taken action? Would you be precise in describing what that action consisted-of in whatever form of descriptive language you choose to use?"

The attached charts detail the health activities we have taken at all Superfund-related sites. In brief, we have worked at 204 of the 546 sites currently on the National Priority List (NPL). In addition we have worked at 448 other Superfund sites. These other sites include emergency or immediate removal sites, and sites on the ERRIS list (approximately 20,000) currently being evaluated under the EPA hazard ranking program.

Question #2: "Is it your intention to conduct some form of preliminary inquiry at every one of the Superfund sites, 546, the projected 1,400 to 2,200? How long do you estimate that will take you with your present budget level and manpower? Depending upon that answer, do you feel that additional resources are necessary to do the job?"

It is our intention to provide health advice to EPA on all sites that pose a potential public health threat. For that reason we feel it is important to assess the health implications of both National Priority List sites and all those not yet on the National Priority List that may present serious health problems. Of course, in addition, we intend to provide whatever health assistance is necessary at emergency sites. We cannot estimate with any certainty how long this task will take since it is so dependent upon receipt of sampling data and other information from EPA as they complete their site investigations. As you know, we have asked for additional resources for this task for the coming fiscal years.

HHS HEALTH-RELATED SUPERFUND ACTIVITY AT

NATIONAL PRIORITY LIST

HAZARDOUS WASTE SITES

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
AL	Ciba-Geigy, Corp	McIntosh	x					
AL	Howbray Engineering Co.	Greenville						
AL	Olin Corp.	McIntosh	x					
AL	Perdido Ground Water Contamination	Perdido	x	x	x			
AL	Stauffer Chemical Co. (Cold Creek Plant)	Bucks	x					
AL	Stauffer Chemical Co. (Lemoyne Plant)	Axis						
AL	Triana-Tennessee River (Triana Arsenal)	Limestone/Morgan	x	x				
AR	Cecil Lindsey	Newport						
AR	Crittenden County Landfill	Marion						
AR	Frit Industries	Walnut Ridge						
AR	Gurley Pit	Edmondson						
AR	Industrial Waste Control	Fort Smith						
AR	Mid-South Wood Products	Mena						
AR	Vertac, Inc.	Jacksonville	x	x				
AS	Taputimu Farm	Island of Tutuila						

DEFINITIONS

Health Consultation: Immediate or short-term consultation to provide health advice and/or health effects information regarding a specific site.

Health Assessment: Initial multi-disciplinary reviews by health professionals of all readily available data to assess the potential nature and magnitude of a health threat at a site.

Pilot Study: Short-term study to screen a target population assumed to have highest exposure at a site, usually includes specimen analysis.

Epi Study: Long-term epidemiologic study involving a comprehensive protocol designed to add knowledge of health effects at a site or sites.

Health Registry: A site-specific or adverse health effects specific registry established and maintained as an adjunct to health effects investigations or epidemiologic studies to track specific diseases and illnesses and long-term health effects to persons exposed to toxic substances.

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
AZ	19th Avenue Landfill	Phoenix						
AZ	Indian Bend Wash Area	Scottsdale-Tempe-Phoenix						
AZ	Kingman Airport Ind. Area	Kingman						
AZ	Litchfield airport Area	Goodyear/Avondale						
AZ	Mountain View Mobile Homes	Globe	x	x				
AZ	Tucson International Airport Site	Tuson	x	x				
CA	Aerojet General Corp.	Rancho Cordove	x					
CA	Atlas Asbestos Mine	Fresno Co.						
CA	Celtor Chemical Works	Hoopa	x					
CA	Coalinga Asbestos Mine	Coalinga						
CA	Coast Wood Preserving	Ukiah						
CA	Del Norte Co Pesticide Storage Area	Crecent City						
CA	Iron Mountain Mine	Redding						
CA	Jibboom Junkyard	Sacramento						
CA	Koppers Co., Inc. (Oroville Plant)	Oroville						
CA	Liquid Gold Oil Corp.	Richmond						
CA	MGM Brakes	Cloverdale						
CA	McColl	Fullerton						
CA	Purity Oil Sales, Inc.	Malaga						
CA	San Gabriel Valley (Area 1)	El Monte						
CA	San Gabriel Valley (Area 2)	Baldwin Park Area						
CA	San Gabriel Valley (Area 3)	Alhambra						
CA	San Gabriel Valley (Area 4)	La Puente						
CA	Selma Pressure Trating Co.	Fresno	x	x				
CA	Stringfellow Acid Pits	Avon Heights	x					
CM	PCB Warehouse	Saipan						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
CO	Broderick Wood Products	Denver						
CO	California Gulch	Leadville Co.	x					
CO	Central City-Clear Creek	Idaho Springs						
CO	Denver Radium	Denver						
CO	Lincoln Park	Canon City	x		x			
CO	Lowry Landfill	Denver	x	x				
CO	Marshall Landfill	Boulder County						
CO	Sand Creek Industrial Site	Commerce City	x	x				
CO	Woodbury Chemical Co.	Commerce City	x					
CT	Beacon Heights Landfill	Beacon Falls	x					
CT	Kellogg Deering	Norwalk	x					
CT	Laurel Park Landfill	Naugatuck	x		x			
CT	Solvents Recovery Service Of New England	Southington						
CT	Old Southington Landfill	Southington						
CT	Yaworski Waste Lagoon	Canterbury						
DC	--	--						
DE	Army Creek Landfill	New Castle Co	x	x				
DE	Delaware City PVC Plant	Delaware City						
DE	Delaware Sand & Gravel Landfill	New Castle Co						
DE	Harvey & Knott Drum, Inc.	Kirkwood	x					
DE	New Castle Spill (Tris Spill)	New Castle County						
DE	Old Brine Sludge Landfill	Delaware City						
DE	Tybouts Corner Landfill	New Castle County	x					
DE	Wildcat Landfill	Dover	x					
DE	New Castle Steel	New Castle County	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
FL	62nd Street Dump	Tampa						
FL	American Creosote Work	Pensacola	x					
FL	Brown Wood Preserving	Live Oak	x	x				
FL	Cabot/Koppers	Gainesville	x					
FL	Coleman-Evans Wood Preserving Co.	Whitehouse	x					
FL	Davie Landfill	Davie						
FL	Florida Steel Corp.	Indiantown	x					
FL	Gold Coast Oil Corp	Miami						
FL	Hippo Road Landfill	Jacksonville	x	x				
FL	Hollingsworth Solderless Terminal Co.	Fort Lauderdale	x					
FL	Kassouf Kimerling Battery	Tampa	x					
FL	Miami Drum Services	Miami						
FL	Munisport Landfill	North Miami						
FL	Northwest 58th Street Landfill	Hialeah	x					
FL	Perramore Surplus	Mount Pleasant	x					
FL	Pepper Steel & Alloy, Inc.	Medley						
FL	Pickettville Road Site	Jacksonville	x	x				
FL	Pioneer Sand Co.	Pensacola	x					
FL	Reeves Southeastern Galvanizing Corp.	Tampa	x	x				
FL	Sapp Battery Salvage	Cottondale						
FL	Schuylkill Metals Corp.	Plant City						
FL	Sherwood Medical Industries	Deland						
FL	Taylor Road Landfill	Gulfcoast						
FL	Tower Chemical Co.	Clermont						
FL	Tri-City Oil Conservationist, Inc.	Temple Terrace	x	x				
FL	Varani spill (Biscayne Aquifer)	Miami						
FL	Whitehouse Oil Pits	Whitehouse-Jacksonville	x					
FL	Zellwood Ground Water Contamination	Zellwood						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
GA	Hercules 009 Landfill	Brunswick	x					
GA	Monsanto Corp. (Augusta Plant)	Augusta						
GA	Olin Corp. (Areas 1,2, & 4)	Augusta						
GA	Powersville	Peach County						
GU	Ordot Landfill	Orodot						
HI	-	-						
IA	Aidex Corporation	Council Bluff	x	x				
IA	Des Moines TCE (once listed as DICO)	Des Moines	x	x				
IA	LaBounty Dump	Charles City	x	x				
ID	Arrcom (Drexler Enterprises)	Rathdrum						
ID	Bunker Hill Mining & Metallurgical	Smelterville	x	x		x		
ID	Flynn Lumber Co.	Caldwell						
ID	Pacific Hide & Fur Recycling Co.	Pocatello						
ID	Union Pacific Railroad Co.	Pocatello						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
IL	A & F Material Reclaiming, Inc.	Greenup	x	x				
IL	Acme Solvent Reclaiming, Inc.	Morristown	x	x				
IL	Belvidere Municipal Landfill	Belvidere						
IL	Byron Salvage Yard	Byron						
IL	Cross Brothers Paul Recycling	Pembrook Township						
IL	Galesburg/Koppers	Galesburg						
IL	Johns-Manville Corp.	Waukegan	x					
IL	LaSalle Electric Site	LaSalle	x	x				
IL	Outboard Marine Corp.	Waukegan	x					
IL	Velsicol Chemical Corp. (Marshall Plant)	Marshall						
IL	Wauconda Sand & Gravel	Wauconda	x	x				
IN	9th Avenue Dump Site	Gary	x					
IN	American Chemical Service	Griffith						
IN	Bennett Stone Quarry	Bloomington						
IN	Envirochem Corp.	Zionsville						
IN	Fisher Calo	La Porte						
IN	Lake Sandy Jo (H & H Landfill)	Gary						
IN	Lemon Lane Landfill	Bloomington	x					
IN	Main Street Well Field	Elkhart						
IN	Marion (Bragg) Dump	Marion						
IN	MIDCO-I	Gary	x					
IN	Neal's Landfill	Spencer	x					
IN	Northside Sanitary Landfill	Zionsville						
IN	Parrot Road Dump	New Haven						
IN	Poor Farm	Hancock County						
IN	Reilly Tar and Chemical	Indianapolis	x					
IN	Seymour Recycling Corp.	Seymour	x					
IN	Wayne Waste Oil	Columbia City						
IN	Wedzeb Enterprises, Inc.	Lebanon						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
KS	Arkansas City Dump	Arkansas City						
KS	Cherokee County (Tar Creek)	Cherokee County	x					
KS	Doepke Disposal (Holliday)	Johnson County						
KS	John's Sludge Pond	Wichita	x					
KY	A. L. Taylor (Valley of the Drums)	Brooks						
KY	AIRCO	Calvert						
KY	B. F. Goodrich	Calvert City						
KY	Distler Brickyard	Jefferson County	x					
KY	Distler Farm	Jefferson County	x					
KY	Lee's Lane Lnadfill	Louisville						
KY	Newport Dump	Newport						
LA	Bayou Bonfouca	Slidell	x					
LA	Bayou Sorell	Bayou Sorell	x					
LA	Cleve Reber	Hefflin	x					
LA	Old Inger Oil Refinery	Darrow	x					
LA	Petro-Processors	Livingston	x	x				
MA	Baird & McGuire	Holbrook	x					
MA	Cannon Engineering Corp. (CEC)	Bridgewater						
MA	Charles George Reclamation Trust Landfill	Tyngsborough	x					
MA	Groveland Wells	Groveland	x					
MA	Hocomonco Pond	Westborough	x					
MA	Industri-Plex 128 (Mark Phillip Trust)	Woburn						
MA	Iron Horse Park	Billerica	x					
MA	New Bedford	New Bedford	x					Epi Study planned

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
MA	Nyanza Chemical Waste Dump	Ashland	x	x				
MA	PSC Resources	Palmer						
MA	Plymouth Harbor/Cannon Engineering Corp.	Plymouth						
MA	Resolve, Inc.	Dartmouth	x					
MA	Silresim Chemical Corp.	Lowell	x	x				
MA	Sullivan's Ledge	New Bedford						
MA	W.R. Grace & Co., Inc. (Acton Plant)	Acton	x	x				
MA	Wells G & H	Woburn	x					
MD	Limestone Road	Cumberland						
MD	Middletown Road Dump	Annapolis						
MD	Sand, Gravel, & Stone	Elkton	x					
ME	F. O'Conner Site	Augusta	x					
ME	McKin Co	Gray	x	x				Epi Study planned
ME	Pinette's Salvage Yard	Washburn	x					
ME	SACO Tannery Waste Pits	Saco	x					
ME	Winthrop Landfill	Winthrop	x	x				
MI	Anderson Development Co.	Adrian	x	x				
MI	Auto IOW chemicals, Inc.	Kalamazoo						
MI	Berlin and Farro	Swartz Creek	x					
MI	Burrows Sanitation	Hartford						
MI	Butterworth Landfill	Grand Rapids	x	x				
MI	Cemetery Dump	Rose Center						
MI	Charlevoix Municipal Well	Charlevoix	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
MI	Chem Central	Wyoming Township						
MI	Clare Water Supply	Clare						
MI	Cliff/Dow Dump	Marquette;						
MI	Duell & Gardner Landfill	Dalton Township						
MI	Electrovoice	Buchanan						
MI	Forest Waste Products	Otisville		x				
MI	G & H Landfill	Utica						
MI	Grand Traverse Overall Supply Co.	Greilickville						
MI	Gratiot County Golf Course	St. Louis	x					
MI	Gratiot County Landfill	St. Louis		x				
MI	Hedblum Industries	Oscoda						
MI	Ionia City Landfill	Ionia City	x	x				
MI	K & L Avenue Landfill	Oshtemo Township						
MI	Kentwood Landfill	Kentwood						
MI	Liquid Disposal, Inc (LDI)	Utica, Shelby Township	x	x				
MI	Littlefield Township Dump	Odan						
MI	Mason County Landfill	Pere Marquette Township						
MI	McGraw Edison Corp.	Albion						
MI	Metamora Landfill	Metamora						
MI	Novaco Industries	Temperance						
MI	Northernaire Plating	Cadillac						
MI	Organic Chemicals, Inc.	Grandville						
MI	Ossineke Ground Water Contamination	Ossineke						
MI	Ott/Story/Cordova Chemical Co.	Dalton Township						
MI	Packaging Corp of America	Filer City						
MI	Petoskey Municipal Well Field	Petoskey						
MI	Rasmussen's Dump	Green Oak Township						
MI	Rose Township Dump	Rose Township						
MI	SCA Independent Landfill	Muskegon Heights						
MI	Shiawassee River	Howell						
MI	Southwest Ottawa County Landfill	Park Township						
MI	Sparta Landfill	Sparta Township						
MI	Spartan Chemical Co.	Wyoming						
MI	Spiegelberg Landfill	Green Oak Township						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
MI	Springfield Township Dump	Davisburg						
MI	Sturgis Municipal Wells	Sturgis						
MI	Tar Lake	Mancelona Township	x					
MI	U. S. Aviex	Howard Township						
MI	Velsicol Chemical Corp. (St. Louis Plan)	St. Louis						
MI	Verona Well Field	Butler	x	x				
MI	Wash King Laundry	Pleasant Plains Twnshp						Epi Study planned
MI	Whitehall Well Field	Whitehall	x					
MN	Arrowhead Refinery Co.	Hermantown						
MN	Boise Cascade/Onan/Medtronics	Fridley						
MN	Burlington Northern	Brainerd/Baxter						
MN	FMC Corp. (Fridley Plant)	Fridley						
MN	General Mills/Henkel Corp.	Minneapolis						
MN	Joslyn Manufacturing & Supply Co.	Brooklyn Center						
MN	Koppers Coke	St. Paul						
MN	LeHillier/Mankato	LeHillier/Mankato	x					
MN	MacFillis & Gibbs Co./Bell Lumber & Pole	New Brighton						
MN	Morris Arsenic Dimp	Morris						
MN	NL Industries/Taracorp/Golden Auto	St. Louis Park						
MN	New Brighton/Arden Hills	New Brighton	x	x				
MN	Nutting Truck & Caster Co.	Faribault						
MN	Oakdale Dump	Oakdale						
MN	Perham Arsenic	Perham						
MN	Reilly Tar & Chemical Corp.	St. Louis Park						
MN	South Andover (Andover Sites)	Andover						
MN	St. Louis River	St. Lousi Co.						
MN	St. Regis Paper Co.	Cass Lake						
MN	Union Scrap	Minneapolis						
MN	Washington County Landfill	Lake Elmo						
MN	Waste Disposal	Andover						
MN	Whittaker Corp.	Minneapolis						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
MO	Ellisville	Ellisville	x	x				
MO	Fullbright Landfill	Springfield	x	x		x		
MO	Minker/Stout/Romaine Creek	Imperial	x	x		x		
MO	Quial Run Mobile Home	Gray Summit	x	x		x		
MO	Shenondoah Stables	Moscow Mills	x			x		
MO	Syntex Facility	Verona	x			x		
MO	Times Beach	Times Beach	x	x		x		
MS	Flowood	Flowood						
MS	Plastifax, Inc.	Gulfport	x					
MT	Anaconda Smelter	Anaconda	x	x				
MT	East Helena Smelter	East Helena	x			x		
MT	Libby Ground Water Contamination	Libby	x	x				
MT	Milltown Reservoir Sediments	Milltown	x					
MT	Silver Bow Creek	Silver Bow/Deer Lodge						
NC	Chemtronics, Inc.	Swannanoa	x					
NC	Martin Marietta,Sodyedo, Inc.	Charlotte	x					
NC	PCB Spills	210 Miles of Roads	x					
ND	Arsenic Trioxide	Southeastern		x				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
ME	Phillips Chemical Co.	Beatrice	---	---				
NH	Auburn Road Landfill	Londonderry						
NH	Dover Municipal Landfill	Dover	x					
NH	Kearsage Metallurgical Corp.	Conway						
NH	Keefe Environmental Services (KES)	Epping	x					
NH	Ottati & Goss/Kingston Steel Drum	Kingston						
NH	Savage Municipal Water Supply	Milford						
NH	Somersworth Sanitary Landfill	Somersworth	x					
NH	South Municipal Water Supply Well	Petersborough						
NH	Sylvester	Nashua	x					
NH	Tinkham Garage	Londonberry	x					
NJ	A. O. Polymer	Sparta Township						
NJ	American Cyanamid Co.	Bound Brook						
NJ	Asbestos Dump	Millington						
NJ	Beachwood/Berkley Wells	Berkley Township						
NJ	Bog Creek Farm	Howell Township						
NJ	Brick Township Landfill	Brick Township						
NJ	Bridgeport Rental & Oil Services	Bridgeport	x					
NJ	Burnt Fly Bog	Marlboro Township						
NJ	CPS/Madison Industries	Old Bridge Township						
NJ	Caldwell Trucking Co.	Fairfield						
NJ	Chemical Control	Elizabeth						
NJ	Chemical Leaman Tank Liners, Inc.	Bridgeport						
NJ	Chemsol, Inc.	Piscataway						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NJ	Combe Fill North Landfill	Mount Olive Township						
NJ	Combe Fill South Landfill	Chester Township						
NJ	Cooper Road	Voorhees Township						
NJ	D'Imperio Property	Hamilton Twonship						
NJ	De Rewal Chemical Co.	Kingwood Township						
NJ	Delilah Road	Egg Harbor Twnship						
NJ	Denzer & Schafer X-Ray Co.	Bayville						
NJ	Diamond Alkali Co.	Newark	x					
NJ	Dover Municipal Well 4	Dover Township						
NJ	Ellis Property	Evesham Township						
NJ	Evor Phillips Leasing	Old Bridge Township						
NJ	Ewan Property Site	Shamong Township	x	x				
NJ	Fair Lawn Well Field	Fair Lawn						
NJ	Florence Land Recontouring Inc.	Florence Township						
NJ	Friedman Property	Upper Freehold Township						
NJ	GEMS Landfill	Gloucester Township	x	x				
NJ	Goose Farm	Plumstead Township						
NJ	Helen Kramer Landfill	Mantua Township						
NJ	Hercules, Inc. (Gibbstown Plant)	Gibbstown						
NJ	Hopkins Farm	Plumstead Township						
NJ	Imperial Oil Co., Inc./Champion Oil Co.	Morganville						
NJ	JIS Landfill	Jamasburg/South Brunswick						
NJ	Jackson Township Landfill	Jackson Township						
NJ	Kin-Buc Landfill	Edison Township	x					
NJ	King of Prussia	Winslow Township						
NJ	Krysowaty Farm	Hillsborough	x					
NJ	Landfill & Development Co.	Mount Holly						
NJ	Lang Property	Pemberton Township						
NJ	Lipari Landfill	Pitman	x					
NJ	Lone Pine Landfill	Freehold	x					
NJ	M & T Delisa Landfill	Asbury Park						
NJ	Monmouth County	Monmouth County	x					
NJ	Monnheim Avenue Dump	Galloway Township						
NJ	Maywood Chemical Co.	Maywood/Rochelle Park						
NJ	Metaltec/Aerosystems	Franklin Borough						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NJ	Monroe Township Landfill	Monroe Township						
NJ	Montgomery Township Housing Development	Montgomery Township						
NJ	Myers Property	Franklin Township						
NJ	ML Industries	Pedricktown						
NJ	Wascolite Corp.	Millville						
NJ	PJP Landfill	Jersey City						
NJ	Pepe Field	Boonton	x					
NJ	Perth Amboy	Perth Amboy	x					
NJ	Pijek Farm	Plumstead Township						
NJ	Price Landfill	Pleasantville	x					
NJ	Radiation Technology, Inc.	Rockaway Township						
NJ	Reich Farms	Pleasant Plains						
NJ	Renora, Inc.	Edison Township						
NJ	Ringwood Mines/Landfill	Ringwood Borough						
NJ	Rock Hill Municipal Well	Rocky Hill Borough						
NJ	Rockaway Borough Well field	Rockaway Township						
NJ	Rockaway Township Wells	Rockaway						
NJ	Roebling Steel Co.	Florence						
NJ	Sayreville Landfill	Sayreville						
NJ	Scientific Chemical Processing, Inc.	Carlstadt						
NJ	Sharkey Landfill	Parsippany/Troy Hills						
NJ	Shieldalloy Corp.	Newfield Borough						
NJ	South Brunswick Landfill	South Brunswick						
NJ	Spence Farm	Plumstead Township						
NJ	Swope Oil & Chemical Co.	Pennsauken	x					
NJ	Syncon Resins	South Kearny						
NJ	Tabernacle Drum Dump	Tabernacle Township	x					
NJ	Toms River Chemical	Toms River						
NJ	U. S. Radium Corp.	Orange		x				
NJ	Universal Oil Products (Chemical Div.)	East Rutherford						
NJ	Upper Deerfield Township Sanitary Landfill	Upper Deerfield						
NJ	Ventron/Velsicol	Woodridge Borough						
NJ	Vineland Chemical Co., Inc.	Vineland						
NJ	Vineland State School	Vineland						
NJ	W. R. Grace & Co., Inc. (Wayne Plant)	Wayne Township	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NJ	Williams Property	Swainton	x					
NJ	Wilson Farm	Plumstead Township						
NJ	Woodland Route 532 Dump	Woodland Township						
NJ	Woodland Route 72 Dump	Woodland Township						
NM	AT & SF/Clovis	Clovis						
NM	Homestake Mining Co.	Milan						
NM	South Valley	Albuquerque						
NM	United Nuclear Corp.	Church Rock						
NV	-	-						
NY	American Thermostt Co.	South Cairo						
NY	Batavia Landfill	Batavia						
NY	Brewster Well Field	Putnam County						
NY	Facet Enterprises, Inc.	Elmira	x					
NY	Fulton Terminals	Fulton						
NY	G. E. Moreau Site	South Glen Falls	x	x				
NY	General Motors/Central Foundry Division	Massena						
NY	Hooker (102nd Street)	Niagara Falls	x					
NY	Hooker (Hyde Park)	Niagara Falls	x					
NY	Hooker (S-Area)	Niagara Falls	x					
NY	Hudson River PCBs	Hudson River	x	x				
NY	Kentucky Avenue Well field	Horseheads						
NY	Love Canal	Niagara Falls	x	x				
NY	Ludlow Sand & Gravel	Clayville						
NY	Marathon Battery	Cold Springs	x	x				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NY	Mercury Refining, Inc.	Colonie	x					
NY	Niagara County Refuse	Wheatfield						
NY	Old Bethpage Landfill	Oyster Bay						
NY	Olean Well Field	Olean	x					
NY	Pollution Abatement Services (PAS)	Oswego	x					
NY	Port Washington Landfill	Port Washington	x					
NY	Ramapo Landfill	Ramapo						
NY	Sinclair Refinery	Wellsville	x					
NY	Solvent Savers	Lincklaen						
NY	Syosset Landfill	Oyster Bay						
NY	Vestal Water Supply Well 1-1	Vestal						
NY	Vestal Water Supply Well 4-2	Vestal						
NY	Wide Beach Development	Brant						
NY	York Oil Co.	Moria	x	x				
OH	Allied Chemical & Ironton Coke	Ironton						
OH	Arcanum Iron & Metal	Darke County						
OH	Big D Campground	Kingsville						
OH	Bowers Landfill	Circleville						
OH	Buckeye Reclamation	St. Clairsville						
OH	Chem-Dyne Site	Hamilton	x	x				
OH	Coshocton Landfill	Franklin Township	x	x				
OH	E. H. Schilling Landfill	Hamilton Township	x	x				
OH	Fields Brook	Ashtabula	x	x				
OH	Fultz Landfill	Jackson Township	x	x				
OH	Miami County Incinerator	Troy	x	x				
OH	Nease Chemical	Salem	x					
OH	New Lyme Landfill	New Lyme						
OH	Old Mill Site (Rock Creek/Jack Webb)	Rock Creek						
OH	Laskin/Poplar Oil Co. (Poplar Oil Co.)	Jefferson	x	x				
OH	Powell Road Landfill	Dayton	x	x	x			

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
OH	Pristine, Inc.	Reading						
OH	Skinner Landfill	West Chester	x					
OH	South Point Plant	South Point						
OH	Summit National	Deerfield Township						
OH	United Scrap Lead Co., Inc.	Troy						
OH	Van Dale Junkyard	Marietta						
OH	Zanesville Well Field	Zanesville						
OK	Compass Industries	Tulsa	x					
OK	Hardage/Criner	Criner						
OK	Sand Springs Petrochemical Complex	Sand Springs	x					
OK	Tar Creek	Ottawa County	x	x				
OR	Gould, Inc.	Portland						
OR	Teledyne Wah Chang (Albany)	Albany						
OR	United Chrome Products, Inc.	Corvallis	x	x				
PA	Berks Sand Pit	Longswamp Township						
PA	Blosenski Landfill	West Caln Township	x					
PA	Brodhead Creek	Stoudsburg						
PA	Bruin Lagoon	Bruin Borough						
PA	Centre County Kepone	State College Borough						
PA	Craig Farm Drum	Parker						
PA	Dorney Road Landfill	Upper Macungie Township						
PA	Douglassville Disposal	Douglassville						
PA	Drake Chemical	Lock Haven	x	x				
PA	East Mount Zion	Springettsbury Township						Epi Study planned

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REGION	SITE	LOCATION	CONTAMINATION	HEALTH ASSESSMENT	FEASIBILITY STUDY	RPM EFFORT	REMEDIAL	CLEAN
03	Enterprise Avenue	Philadelphia						
03	Fischer & Porter Co.	Warminster						
03	Havertown PCP	Haverford						
03	Heleva Landfill	North Whitehall	*					
03	Henderson Road	Upper Merion Township						
03	Hranica Landfill	Buffalo Township						
03	Industrial Lane	Williams Township						
03	Kimberton	Kimberton Borough	* *					
03	Lackawanna Refuse	Old Forge Borough						
03	Lehigh Electric & Engineering Co.	Old Forge Borough	*		*			
03	Lindane Dump	Harrison Township						
03	Lord Shope Landfill	Girard Township	*					
03	Malvern TCE	Malvern						
03	Modena Administrative	Modena Borough/Elton	*					
03	Mont Dump	Philadelphia						
03	Mill Creek Dumping	Erie	* *		*			
03	Moyers Landfill	Hopkinville	* *					
03	Old City of York Landfill	Penn Village						
03	Palmerton Landfill	Green City						
03	Palmerton Zinc Pile	Palmerton	*		*			
03	Presque Isle	Erie						
03	Resin Disposal	Jefferson Borough						
03	Ridley Dumpsites	City of Phoenix						
03	Tyler Borough Dump	Tyler Borough						
03	Upper Perkiomen Valley Dump	Upper Merion Township	* *					
03	Westinghouse Para	Upper Merion Township						
03	York Landfill (Lincoln Hwy)	Chester						
03	York Landfill	Susquehanna Township	*					
03	Berlinn	Erie Co.						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
PR	Barceloneta Landfill	Florida Afuera						
PR	Fibers Public Supply Wells	Jobos						
PR	Frontera Creek	Rio Abajo						
PR	GE Wiring Devices	Juana Diaz	x					
PR	Juncos Landfill	Juncos	x	x				
PR	RCA Del Caribe	Barceloneta						
PR	Upjohn Facility	Barceloneta	x	x				
PR	Vega Alta Public Supply Wells	Vega Alta						
RI	Davis Liquid Waste	Smithfield						
RI	Landfill & Resource Recovery, Inc.	North Smithfield						
RI	Peterson-Puritan, Inc.	Lincoln/Cumberland						
RI	Picillo Farm	Coventry	x					
RI	Stamina Mills, Inc.	North Smithfield	x					
RI	Western Sand & Gravel	Burrillville	x	x				
SC	Carolawn, Inc.	Fort Lawn						
SC	Geiger (C & M Oil)	Hantoules						
SC	Independent Nail Co.	Beaufort						
SC	Kalama Specialty Chemicals	Beaufort						
SC	Koppers Co., Inc. (Florence Plant)	Florence						
SC	Leonard Chemical Co., Inc.	Rock Hill						
SC	Palmetto Wood Preserving	Dixianna						
SC	Scrdi Bluff Road	Columbia						
SC	Scrdi Dixiana	Cayce						
SC	Wamchem, Inc.	Burton						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
SD	Whitewood Creek	Whitewood	x	x				
TN	Asmicola Dump	Chattanooga						
TN	Gallaway Pits	Gallaway	x			x		
TN	Lewisburg Dump	Lewisburg						
TN	Murray-Ohio Dump	Lawrenceburg						
TN	North Hollywood Dump	Memphis	x	x				Epi Study planned
TN	Velsicol Chemical Corp.	Toone	x					
TT	PCB WASTES	Pacific Islands						
TX	Bio-Ecology Systems, Inc.	Grand Prairie	x					
TX	Crystal Chemical	Houston	x	x				
TX	French Limited	Crosby	x	x				
TX	Geneva Industries	Houston	x					
TX	Harris (Farley Street)	Houston						
TX	Highlands Acid Pit	Highland						
TX	Motco, Inc.	La Marque	x					
TX	Pig Road	New Waverly						
TX	Sikes Disposal Pit	Crosby	x					
TX	Triangle Chemical Co.	Bridge City	x					
TX	United Creosoting Co.	Conroe	x	x				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
UT	Rose Park Sludge Pits	Salt Lake City	x	x				
VA	Chisman Creek	York County						
VA	Matthews Electroplating	Salem	x					
VA	Saltville Waste Disposal Ponds	Saltville						
VA	U. S. Titanium	Piney River						
VI	-	-						
VT	Old Springfield Landfill	Springfield	x	x				
VT	Pine Street Canal	Burlington	x					
WA	American Lake Gardens	Tacoma	x	x				
WA	Colbert Landfill	Colbert						
WA	Commencement Bay, Near Shore/Tideflats	Pierce County						
WA	Commencement Bay, South Tacoma Channel	Tacoma	x					
WA	FMC Corp. (Yakima)	Yakima						Epi Study planned
WA	Frontier Hard Chrome, Inc.	Vancouver						
WA	Greenacres Landfill	Spokane County						
WA	Harbor Island (Lead)	Seattle	x					
WA	Kaiser Aluminum (Mead Works)	Mead						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
WA	Lakewood	Lakewood						
WA	Pesticide Lab (Yakima)	Yakima						
WA	Queen City Farms	Maple Valley						
WA	Rosch Properties	Roy	x					
WA	Western Processing Co., Inc.	Kent	x					
WI	City Disposal Corp. Landfill	Dunn						
WI	Delavan Municipal Well No. 4	Delavan						
WI	Eau Claire Municipal Well Field	Eau Claire City						
WI	Janesville Ash Beds	Janesville						
WI	Janesville Old Landfill	Janesville						
WI	Kohler Co. Landfill	Sheboygan						
WI	Lauer I Sanitary Landfill	Menomonee Falls						
WI	Lemberger Transport & Recycling, Inc.	Franklin Township						
WI	Master Disposal Service, Inc., Landfill	Brookfield						
WI	Mid-State Disposal, Inc., Landfill	Cleveland Township						
WI	Moss-American (Kerr-McGee Oil Co.)	Milwaukee						
WI	Muskego Sanitary Landfill	Muskego						
WI	Northern Engraving Co.	Sparta						
WI	Oconomowoc Electroplating Co., Inc.	Ashippin						
WI	Omega Hills North Landfill	Germantown						
WI	Onalaska Municipal Landfill	Onalaska						
WI	Schmalz Dump	Harrison						
WI	Scrap Processing Co., Inc.	Medford						
WI	Waste Research & Reclamation Co.	Eau Claire						
WI	Wheeler Pit	La Prairie Township						

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
WV	Fike Chemical, Inc.	Nitro	x	x				
WV	Follansbee	Follansbee						
WV	Leetown Pesticide	Leetown						
WV	West Virginia Ordance	Point Pleasant						
WY	Baxter/Union Pacific Tie Treating	Laramie						

HHS HEALTH-RELATED SUPERFUND ACTIVITY AT

NOW - NATIONAL PRIORITY LIST

HAZARDOUS WASTE SITES

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
AK	-	-						
AL	Church of God	Moody	x					
AL	Lead Smelter	Leeds	x					
AL	Mosleys/Bryarses		x					
AL	Petro Products	Athens	x					
AR	Crown Aviation	Newport	x					
AR	Gramlich Site	Fort Smith	x	x	x			
AR	Olin	N. Little Rock	x					
AR	PCB	Little Rock	x					
AZ	52nd Street Site							
AZ	Hughes Aircraft	Tucson	x					
AZ	Motorola, Inc.	Phoenix	x					
AZ	Uranium Tailings	Ship Rock, Church Rock	x	x				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
CA	Asbestos Coatings	West Covina	x					
CA	BKK Landfill		x					
CA	Benicia Train	Agoura	x					
CA	Calabasas Landfill		x					
CA	Duraspan, Inc	Escondido	x					
CA	Escondido		x					
CA	Feather River	San Juan	x					
CA	Grass Valley	Hoopa Valley	x					
CA	Hoopa Valley Indian Reservation	L.A. County	x	x				
CA	L.A. County	Sacramento	x					
CA	McClellan Air Force Base	Torrance	x	x				
CA	Montrose Chemical Corp.		x	x				
CA	Neville (Private Well)	Santa Fe	x					
CA	Neville Chemical Site	Pleasenton	x	x				
CA	Pleasenton Fire Dept.	Fresno County	x					
CA	Selma Leasing Co.	Clear Lake	x					
CA	Sulfur Bank Mine		x					
CO	Asarco Globe Plant	Denver	x	x				
CO	Boulder		x					
CT	Custom Plating & Buffing Site	Torrington	x	x				
CT	Derby Drum Site	Derby	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
DC	Fort Simms Site		x					
DE	Delaware Drum Site	Marshalltown	x					
DE	Formosa Plastics Spill	New Castle	x					
DE	Odessa Truck Spill	Odessa	x					
DE	Sealand Limited	Mount Pleasant	x					
FL	Alachua Co.	Alachua Co.	x					
FL	American Electric Co.	Jacksonville	x					
FL	Biscayne Aquifer	Southern Florida	x	x				
FL	Borden Chemical		x					
FL	Eglin AF Base	Eglin	x					
FL	Landia Chemical Co.	Polk County	x					
FL	Martin Company	Ponealas Co.	x					
FL	Medley Wellfield	Miami/Dade Co.	x	x				
FL	Miami Dade County	Miami	x					
FL	Tampa	Tampa	x					
FL	University of S. Florida		x					
GA	Conversion Tech/Amer Ele		x					
GA	Coweta County	Coweta Co	x					
GA	Hazelhurst	Hazelhurst	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
GA	Holley Electric	Jesup	x	x	x			
GA	Ruistica Estates	Coweta County	x					
GA	Southern RR Wrecking Yard		x					
GA	Swainsboro Print Works	Swainsboro	x					
GA	Train derailment	LaGrange	x					
GA	Train derailment	Greensboro	x					
GA	Train derailment	Ludowici	x		x			
GA	Truck Accident - I285	Atlanta	x					
GA	Warehouse fire	Savannah	x					
GU	Trust Territories		x					
HI	--	--						
IA	Blackhawk County Landfill	Waterloo	x	x				
IA	Frit Industries Site	Humboldt	x	x				
IA	Michael Co. Site	Bettendorf	x	x				
ID	Boise	Boise	x					
ID	Kellogg	Kellogg	x			x		

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
IL	Aldens, Inc.	Chicago	x					
IL	Atkinson		x					
IL	Barge incident	Mississippi River	x					
IL	Bennett Stone Quarry	Bloomington	x					
IL	CID		x					
IL	Crab Orchard Green National Wildlife	Marion	x	x				
IL	Cyanide Chip Sites	Chicago Area	x	x				
IL	Dioxin sites		x					
IL	Eagle Trailer, Inc	Summit	x					
IL	Edwin Cooper Company	Sauget	x		x			
IL	Electrical Utilities		x					
IL	Envirochem Corp.	Zionsville	x					
IL	First National Bank	Chicago	x					
IL	Fisher Calo	LaPorte	x					
IL	Granite City Lead Study	Springfield	x					
IL	Hodges & John's Manville	Chicago (East)	x					
IL	Industrial Express		x					
IL	J's Mobile Semi Trailer	McCook	x					
IL	J. Fiorito Leasing Mfg.	Rosemont	x					
IL	Koppers Site	Galesburg	x	x				
IL	Kozyak Stables	Maryville	x					
IL	LIVCO, Inc.		x					
IL	Lake Erie	Lake Erie	x					
IL	Lead Study	Venice	x					
IL	Liquid Dynamics	Chicago	x					
IL	Manville Site	Waukegan	x	x				
IL	Neal's Landfill	Bloomington	x					
IL	Ottowa	Ottowa	x					
IL	Railroad Yard S.E		x					
IL	Rockford		x					
IL	Seminary Creek	Flora	x					
IL	Southeast Chicago	South Deering	x	x				
IL	Transformer Fire	First National Bank	x					
IL	West Chicago	West Chicago	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
IN	Cancer cluster	Lake County	x					
IN	McCullough Farm	Knightsville	x					
IN	PCB	Bloomington	x		x			
IN	Westinghouse Corp	Bloomington	x					
KS	Chemical Commodities, Inc.	Olathe	x	x				
KS	Derby Refining Co. Site	Wichita	x	x				
KS	Furley Dump	Furley	x					
KS	Hois Superfund Site		x					
KS	Pester Refining Site	El Derado	x	x				
KS	Thompson Hayward Chemical	Kansas City	x					
KY	Coal Gasification Plant	Owensboro	x					
KY	Corney Road UNP	Cynthana	x	x				
KY	Dioxin (horse arena)		x					
KY	Goodloe School	Owensboro	x					
KY	Harrison Co.	Cynthiana	x					
KY	Ky. Energy Corp.	Franklin	x					
KY	Railroad Accident	Paris	x					
LA	Dixie Metals Smelter	Hefflin	x					
LA	Michael Company Site		x					
LA	Monsanto Plant	Luling	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
LA	Nerve Gas Incident	Lake Charles	x					
LA	New Orleans	New Orleans	x					
LA	Olin Chemical	Lake Charles	x					
LA	Train Derailment	Livingston	x	x				
LA	W. J. Oil	LaRose	x					
MA	Anderson Development Co.	Adrian	x					
MA	Cornell-Dubilier Electronics Co.	New Bedford	x	x				
MA	Dorchsman farm fire	Canton	x					
MA	Driscoll Development Site	North Andover	x	x				
MA	Grant Gear Company	Iron Horse Park	x	x				
MA	Johns-Manville Asbestos Landfill	Boston	x					
MA	Lewis Chemical Corp.	Lexington	x					
MA	Lexington	Norwood	x		x			
MA	Norwood (PCB)	Woburn	x					
MA	Old Springfield Dump	Holiston	x	x				
MA	Randolph Landfill							
MA	Winthrop Pond							
MA	Woburn							
MD	California MD Drum Dump	St Mary's County	x					
MD	Dale Dickerson Site	Baltimore Tier 3	x					
MD	Dynasurf Chemical Corp	Baltimore	x					
MD	FMC Corp. (Dioxin)	Leonard Township	x					
MD	Leonard Town	Northeast	x					
MD	McCloud Property	Leonardtown	x	x				
MD	Montgomery Brothers							
MD	St. Mary's							

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
ME	Charlie George Landfill	Tyngsboro	x	x				
ME	Cherryfield	Cherryfield	x					
ME	Gravel Pits	Baileyville	x	x				
ME	Hocomoco Pond		x					
ME	PCB Site	Baileyville	x					
ME	PCB Spill	Washburn	x					
MI	Dow Chemical	Midland	x					
MI	East Bay Township	Traverse City	x					
MI	Groundwater Contamination	Charlevoix	x	x				
MI	Isanti County Waste	Isanti Co	x					
MI	LDI & G&H Landfill	Shelby Township	x					
MI	LDI & MI	Lenawee Co.	x					
MI	Landfill	Whitehall	x					
MI	Liquid styrene spill	Midland	x					
MI	Pine Grove Subdivision/E. Bay Township	Traverse City	x	x				
MI	Rockwell Landfill	Midland	x					
MI	Shelby Township	Shelby Township	x					
MI	Sunnybrook Stables		x					
MN	Army Ammunition Plant	Twin Cities	x					
MN	Long Branch		x					
MN	National Lead-Taracorp.	St. Louis Park	x					
MN	St. Louis Park	St. Louis County	x					
MN	Sunnybrook Stables	Mound	x	x				
MN	Twin Cities Arsenal		x					
MN	William Pipeline Co.		x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	RFI STUDY	RESIDENCE	OTHER
MO	Baxter Garden Center	Chesterfield	0	X				
MO	Bill Gay Farm		0					
MO	Bliss Tank Farm	Frontenac	0	X				
MO	Bull Moose Tube		0					
MO	Canfil's Residence		0	X				
MO	Community Church	Manchester	0	X				
MO	Conservachem Chemical Co.		0					
MO	Dump Farm		0					
MO	Edgerton Site		0					
MO	E.E. Evans Farm	Aurora	0					
MO	East North Street	Eureka	0	X				
MO	Email Trunk Lines	St Louis	0					
MO	Highway 109		0	X				
MO	Holden		0					
MO	Jones Trunk Lines		0					
MO	Manchester United Methodist Church	Manchester	0					
MO	Lang Manor/Gladrock Road	Cedar Hill	0	X		X		
MO	Middlebar Drive Landfill	St. Joseph	0	X				
MO	Mo's Tavern	Sontag GA	1					
MO	Morgans Springs	Crawford County	0					
MO	Mid-America Arena	Ellisville	0	X				
MO	Moosha Signature	Moosha	0					
MO	Pierce, Glen Commodities		0					
MO	Prentice Truck Trans. Co.	St. Louis	0					
MO	P.J. Hamill Transfer Co.		0					
MO	Pierce Road	Hamill	0	X		X		
MO	S. Shuba Farm	Aurora	0					
MO	Silverbrook Landfill	Kansas City	0	X				
MO	Southwood School (Alumni)	St. Louis	0					
MO	Shannonview Landfill	St. Joseph	0	X				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
MO	S.B. Erwin Farm		x					
MO	Saddle & Spur Riding Club		x	x				
MO	Saline Creek Site	Murphy, Jefferson City	x	x				
MO	Sontag Road (Dioxin)		x	x		x		
MO	Southern Cross Lumber		x					
MO	Spring River		x					
MO	St. Louis Flood		x					
MO	St. Louis Trucking Spill	St. Louis	x					
MO	Steward Sanitary Supply	St Louis	x					
MO	Sturgeon OCP Spill		x					
MO	Sullin's Residence		x					
MO	Talley Farm	Marionville	x	x				
MO	Timberline Stables		x	x				
MO	United Methodist Church	Manchester	x					
MO	Venture Farms		x					
MO	Wall's Residence		x					
MS	Contaminated Water Sys.	Benton	x					
MS	Gulf Battery Exchange	Ocean Springs	x					
MS	Miss. River Barge		x					
MS	Nachez Industries	Nachez	x					
MS	Reichold Chemical Site	Columbia	x					
MS	Truck Wreck, I-55 S		x					
MT	Dillon	Dillon	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NC	Davidson Asbestos		x					
NC	Creosote Timber	Lumberton	x					
NC	Jadco-Hughes Facility	Belmont	x					
NC	Lenoir Site	Lenoir	x					
NC	Potter's Pits		x					
NH	Alukonsis Asbestos Site	Hudson	x	x				
NH	Baker Asbestos Site	Nashau	x	x				
NH	Bursey Asbestos Site		x	x				
NH	Columbe Asbestos Site	Nashau	x	x				
NH	Coolidge Site Asbestos	Hudson Area	x	x				
NH	Epping/Keefe	Epping	x					
NH	Johnson Landfill	Salem	x	x				
NH	Londonderry Apts.	Londonderry	x					
NH	Matarazo Asbestos Site	Nashua	x	x				
NH	Nashau/Hudson Asbestos		x					
NH	Pointer Asbestos Site		x	x				
NH	Ridge Avenue Site	Hudson	x					
NH	Sprague Site	Nashau	x	x				
NH	Tebbetts Road Drum Site	Barrington	x	x				
NH	Torrington Site		x					
NJ	Blue Spruce Intern.		x					
NJ	Bob's Garden World		x					
NJ	Boonton		x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NJ	Borne Chemical	Elizabeth	x					
NJ	Brady Iron & Metals	Newark	x					
NJ	Bryonne		x					
NJ	Chemical Insecticide Site	Edison Township	x	x				
NJ	Cobham Park		x					
NJ	Diamond Shamrock	Newark	x	x		x		
NJ	Edison		x					
NJ	Frontage Road Drum Dump	Newark	x	x				
NJ	Gividan Chemical Co.	Clifton	x					
NJ	Glen Ridge & Montclair	Montclair	x	x				
NJ	Jones Industrial Service	S. Brunswick Township	x					
NJ	Kapkowski Road	Newark	x					
NJ	Montclair/Glenridge	Orange	x					
NJ	Newport City Development	Newport City	x					
NJ	Pennsauken Municipal Water Supply	Pennsauken	x	x				
NJ	Pine Valley Golf Club	Clementon	x					
NM	Albuquerque South Valley	Albuquerque	x					
NM	Plateau Incorporated	Bloomfield	x					
NM	Pronto Industries	Albuquerque	x					
NM	San Jose Well	Albuquerque	x					
NM	UNC Incorp.	Church Rock	x					
NV	BMI Henderson	Henderson/Pittman	x	x				
NV	BMI Site		x					
NV	Pesticide Usage		x					
NV	Vapan Truck Spill		x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
NY	Applied Environ. Ser.	Glencore, LI	x					
NY	Bridgeport Rentals		x					
NY	Brookfield Landfill	Staten Island	x					
NY	Buffalo	Erie County	x					
NY	Burns Chemical Dye	Poughkeepsie	x					
NY	Byron Barrel Site	Byron/Genesee County	x	x				
NY	Ethylene Dibromide Spill		x					
NY	Groundwater Contamination	Wallkill	x	x				
NY	Hauppauge High School	Suffolk Co.	x					
NY	Hooker	N. Tonawanda	x					
NY	Hooker Durez	Niagara Falls	x					
NY	Merrick Landfill	Long Island(Oceanside)	x					
NY	Mount Ivy	Rockland City	x					
NY	Mount Vernon		x					
NY	Moureau Lake		x					
NY	Quantos	Long Island	x					
NY	Rockland Co.	Rockland Co.	x					
NY	Signa Trading Site	Mount Vernon	x	x				
NY	Tifft Farm Preserve	Buffalo County	x					
NY	Transformer Fire		x					
NY	Wappinger Falls Hi. Sch.	Wappinger Falls	x					
OH	Anaconda Ave	Akron	x					
OH	Chlordane	Fox Family	x					
OH	Detroit Aluminum & Brass Co.	Bellefontaine, Logan Co	x	x				
OH	Industrial Excess Landfill	Uniontown	x	x				
OH	Mid - State Disposal Site	Mid-state	x		x			
OH	Rock Creek	Rock Creek	x					
OH	Seacoast Landfill		x					
OH	T. P. Long	Akron	x					
OH	Union Carbide	Marietta	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
OK	Dennis Grocery & Feed	Midwest City	x					
OK	Resource Recov.& Refin.	Sand Spring	x					
OK	Tinker Field	Midwest City	x					
OR	Alkalai Lake		x					
OR	Oil Spill	Yaquina Bay	x					
OR	Rhone-Poulenc Chemical Co.	Portland	x	x				
PA	Ambler Asbestos		x					
PA	Amchem Co.	Montgomery County	x					
PA	Barge Bulkfleet		x					
PA	Barkman Sanitary Landfill	Honeybrook Township	x					
PA	Bensalem		x					
PA	Blumberg & Nicholson		x					
PA	Browns Battery/Shaner	Hamburg	x					
PA	Centralia Mine Fire		x					
PA	Cherryville	Lehigh T/Shp north	x					
PA	Chrin Brothers Landfill	Northampton Co.	x	x				
PA	Clearview Landfill		x					
PA	Clinton County	Clinton County	x					
PA	Coma Property	Towanda	x					
PA	Conrail Chloroform Spill	Midway	x					
PA	Conshohocken Drum Site		x					
PA	Dareup Warehouse Site	Youngsville	x					
PA	Delaware Container Corp.	Coatsville	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
PA	Drackett		x					
PA	Dracup Warehouse	Youngsville	x	x				
PA	Forty Fort	Warminster	x					
FA	Gasoline Spill		x					
PA	Gravers Road Asbestos		x					
PA	John Crossly Farm	Berks County	x					
PA	Knight Rd, PCB	Philadelphia	x					
PA	Lagoon	Westline	x	x				
PA	Lake Lisa Site	Dolphin Co. (Harrisburg	x	x				
PA	Letterkenny Army Depot	Chambersburg	x					
PA	McKeesport	Allegheny Co	x					
PA	Monroe Co.		x					
PA	National Wood Preserver	Haverford	x	x				
PA	Nicolet asbestos Tailings Site	Ambler	x	x				
PA	Old Forge	Old Forge	x	x				
PA	Pocono Summit	Pocono	x					
PA	Revere Chemicals		x					
PA	Rohm & Hass Company		x					
PA	School Village Development	Ambler	x	x				
PA	Shippensburg		x					
PA	Sun Gasoline Spill	New Town	x					
PA	Sunset Golf Course	Dauphin County	x					
PA	Swissvale Auto Parts	Swissvale	x					
PA	Tinicum Marsh Fire	Philadelphia	x					
PA	Tioga		x					
PA	Towanda Lead Site	Bradford County	x					
PA	Trafford, PCB Site		x					
PA	Train Derailment	Lower Merion Twn	x					
PA	Turco Coating		x					
PA	Tybouts Corner		x					
PA	Van Elswyck Property	Berks Co.	x	x				
PA	Vulcanized Rubber/Plastic		x					
PA	Warren Co.		x					
PA	Westinghouse TCE		x	x				

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
PR	Carbon Tetrochloride	Spill UpJohn	x					
PR	Morgan Chemical	Baymore	x					
RI	Cannob Park		x					
RI	Central Landfill	Johnston	x	x				
RI	Forestdale Stomina Mills		x					
RI	Rushworth Family	Burrillville	x	x				
RI	Silvester Brothers Landfill	Johnston	x	x				
SC	Alleged PCB Toxicity		x					
SC	Asbestos Site		x					
SC	Medley Farm Cherokee		x					
SC	Nassau Recycling Co.		x					
SC	Sangamo Electric Co.		x					
SC	Southern Asbestos Co. Plant	Bennettsville	x	x				
SD	Arsenic contamination	Southeast Counties	x					
SD	Spill		x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
TN	American Creosote	Jackson	x					
TN	Arlington Blending Co.	Arlington	x	x				
TN	DOE (Y-12)	Oak Ridge	x	x				Epi Study planned
TN	Galloway Pond		x					
TN	J&L Drum	Memphis	x					
TN	Private Well Testing		x					
TN	Sadd Oil	Nashville	x					
TT	--	--						
TX	Barker Chemical Site	Grandview	x					
TX	Baytown		x					
TX	Blackleaf Chemical	Waco	x					
TX	Breo Refining		x					
TX	Chromate Spill	Orange	x					
TX	City of Austin	Austin	x					
TX	Crystal City Municipal Airport	Crystal City	x	x				
TX	Dallas Lead Problem		x					
TX	Deer Park		x					
TX	Dept of Correction	Huntsville	x					
TX	Dixielead Smelter	Dallas Lead	x	x				
TX	General Dynamics	Fort Worth	x					
TX	Hastings Radiochemical Site	Brazoria County	x	x				
TX	Jet Set, Inc.	Dewalt	x					
TX	Liberty Waste Mgt		x					
TX	Linfield Landfill	Dallas	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
TX	Mercury/Goose Creek	Baytown	x					
TX	Odessa		x					
TX	Olin	Houston	x					
TX	Pesses Company	Fort Worth	x	x				
TX	Radiation-Public Water		x					
TX	Rosenthal	Paris	x					
TX	Stewco, Inc.	Washcom	x					
TX	Thomas Hayward Chem.		x					
TX	Tyler/Truck Spill		x					
TX	Union Carbide Chemical	LaMarque	x					
UT	Montgomery Ward Catalog Sales Show	Monticello	x	x				
UT	Monticello	Monticello	x					
UT	PCB Transformer Explosion		x					
UT	Park City		x					
VA	Hampton Cylinder	Hampton	x					
VA	Moore Fite Site	Hampton	x					
VA	Overnite Transportation		x					
VA	PCB Spill	Roanoke	x					
VA	Rhinehart Tire Fire	Winchester	x	x				
VT	Interstate Uniform	Williamstown	x					

STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
WA	Five Rivers	Lincoln Co.	x					
WA	King County		x					
WA	Lakewood Municipal Wells		x					
WA	Ponders Corners/Plaza Cleaners	Lakewood	x	x				
WA	Tacoma Harbor	Tacoma	x					
WA	Tacoma Smelter	Tacoma	x			x		
WA	Tacoma Well 12A	Tacoma	x	x				
WA	Terminal Five	Seattle	x					
WA	Trout Lake		x					
WI	Arsenic Site	Aniwa	x	x				
WI	Furans	Madison	x					
WI	Municipal Solid Waste In.		x					
WI	Wetex Pet Foods		x					

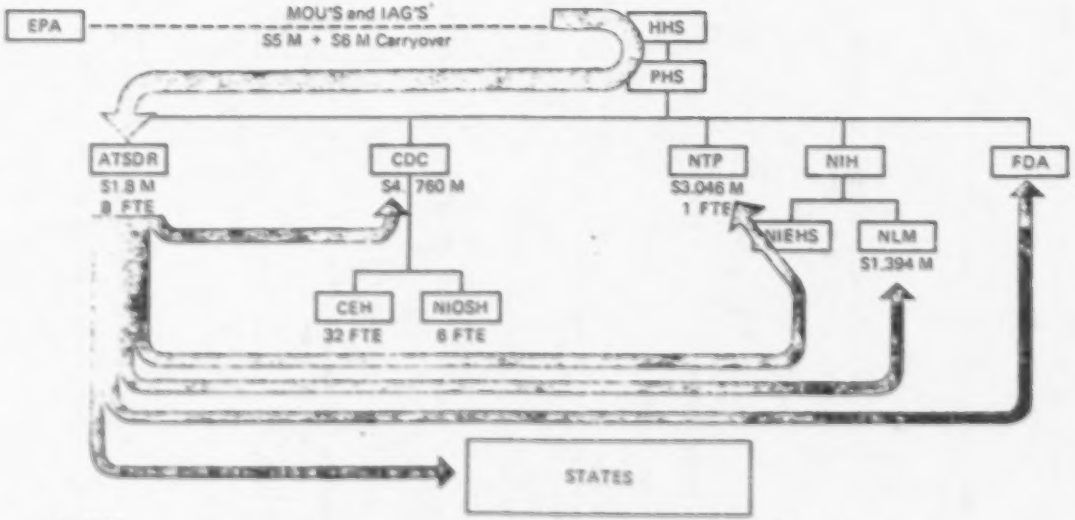
STATE	SITE	LOCATION	CONSULTATION	HEALTH ASSESSMENT	PILOT STUDY	EPI STUDY	REGISTRY	OTHER
WV	Big John's Hoult Road	Fairmont	x					
WV	Big John's Salvage Site	Fairmont	x	x				
WV	Coon's Run Drum Site	Harris (Adamsville)	x					
WV	Cox Landing Incident	Le Sage	x					
WV	Guy Richie Farm	Keyser	x	x				
WV	Harris Property	Poca	x					
WV	Holden Chemical Company	Ona	x	x				
WV	King's Run Farm	Randolph County	x					
WV	McClintic Wildlife Refuge	Point Pleasant	x					
WV	Monsanto Plant	Nitro	x					
WV	Nitro		x					
WV	PCB Spill	Harrisburg	x					
WV	Robinson Property		x					
WV	Tanker Truck Spill		x					
WV	Yokum Residence Rt 22	Petersburg	x					
WY	Clairmont		x					
WY	Train spill	Sheridan County	x					

Question #9: "If you would give us a copy (top) of the budget, so that we can see that breakdown, we would appreciate it."

OBLIGATIONS

OBJECT CLASS	1983 (Actual) $(000)	1984 (Projected) $(000)	1985 (Projected) $(000)
Personnel Compensation & Benefits	$1,967	$3,035	$4,074
Travel, Personnel	192	485	768
Transportation, Things	6	2	4
Communication	16	6	3
Printing & Reproduction	14	22	34
Other Contractural Services and Grants	5,839*	3,982	9,188
Supplies and Materials	110	300	263
Equipment	511	383	286
Totals	$8,655	$8,215	$14,620
*Includes approximately $3 million obligated in FY 1983 to WLM & WTP but available for their use in FY 1984		3,000 $11,215	

DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
SUPERFUND HEALTH-RELATED ACTIVITIES
FLOW OF RESOURCES
FY 1984



TOTALS

$11 M
47 FTE

* Included in $11M

** Separately negotiated - not in $11M

$0.4M Non-Site specific projects within States *

$4.8M Site specific health studies **

Question 46: "It is my understanding that there are currently only about six persons assigned full time to the Superfund unit located in Atlanta, none of whom is a physician or other health professional. I ask you to submit in writing for the record to the committee the specific grades and responsibilities of those persons."

The six people officially detailed to the Agency for Toxic Substances and Disease Registry are:

- Program Analyst, GS-345-14

  Responsible for the management of the ATSDR Superfund Program and serves as the Chief of the Superfund Implementation Group within ATSDR.

- Health Scientist, GS-601-13

  Responsible for coordinating ATSDR activities related to the assessment of the potential risk to public health for Superfund sites which are being considered for planned removal and remedial action.

- Public Health Advisor, GS-685-13

  Responsible for coordinating all ATSDR activities related to the assessment of the potential risk to public health for all emergency and immediate removal sites.

- Program Analyst, GS-345-13

  Responsible for coordinating public affairs, legislative activities, planning and program evaluation activities, budget development, and for developing and monitoring interagency agreements and contracts.

- Administrative Clerk, GS-303-6

  Responsible for coordinating all support and clerical functions within ATSDR. Duties include coordinating travel arrangements, assigning clerical work, assisting in budget development, handling non-technical inquiries and routine responses to questions from general public and other agencies involved in Superfund activities, and general office procedures and issues.

- Secretary, GS-318-5

  Serves as the secretary to the Chief, Superfund Implementation Group.

Two additional positions are in the process of being filled:

- Health Scientist, GS-601-12/13

  Will be responsible for providing technical assistance and coordination of activities related to planned removal and remedial actions.

- Fiscal Accounting Assistant, GS-503-7

  Will be responsible for assisting in budget development and control. Duties will include analyzing various fiscal and accounting reports and preparation of fiscal reports to EPA.

The remaining thirty-nine positions have been assigned to the various Public Health Services Agencies involved in Superfund activities:

Center for Environmental Health, Centers for Disease Control

- Eight (8) Public Health Advisors

  Stationed in EPA Regional Offices; serve as Regional coordinators of all PHS Superfund activities related to emergency, immediate removal and remedial sites; and for providing assistance to State health agencies.

- Six (6) Medical Epidemiologists
  One (1) Medical Toxicologist
  One (1) Public Health Doctor

  Provide medical advice and consultation to State and local health agencies, EPA, and other Federal agencies on the potential risk to community health from Superfund immediate removal and remedial sites and in the case of emergencies. Responsible for evaluating research, industrial, medical, toxicologic, and other data arising from and about hazardous waste dumps in the United States.

- One (1) Hydrologist
  Two (2) Environmental Health Scientists
  One (1) Health Scientist

  Provide health advice for CERCLA activities related to the assessment of the potential risk to community health for those sites which are being considered for planned removal and remedial action and for emergency and immediate removal sites. Responsible for providing assistance to State and local health agencies, EPA, and other Federal agencies in the conduct of health assessments and surveys and in development of proposed specific health studies.

- Two (2) Public Health Advisors

  Provide administrative and technical support in the area of health surveys and in the development of proposed health studies.

- Two (2) Clerk Typists

  Provide clerical support for Superfund activities.

- Three (3) Chemists
  Two (2) Research Chemists
  Two (2) Medical Technologists
  One (1) Scientist

  Responsible for developing standard guidelines and protocols for needed laboratory and/or epidemiologic investigations related to Superfund sites. Provide laboratory support at Superfund emergency, immediate, and remedial sites.

Total: 32

NIOSH, Centers for Disease Control

- One (1) Project Officer

  Serves as coordinator for all worker health and safety projects. Responsible for developing a guidance manual on worker safety and health for Superfund activities.

- One (1) Industrial Engineer
  One (1) Writer/Editor
  One (1) Industrial Engineer Technician
  Two (2) Industrial Hygienist

  Responsible for the conduct of various worker health and safety projects related to CERCLA sites. These include training for State and local health officials on worker safety and health, exposure assessment studies, testing of personal protective equipment and clothing, and the issuance of worker protection guidance and training materials.

Total: 6

National Toxicology Program

- One (1) Chemical Manager

  Responsible for directing the collection of literature and evaluating it in relation to chemicals assigned for testing, for designing experimental protocols for testing, for reviewing performance of the contract laboratories involved in testing, and for collecting and evaluating research results and preparing technical reports on the studies.

Total: 1

Question #6: For how many chemicals is the Superfund health agency conducting such laboratory (toxicological) studies?

Question #7: Has the agency identified the toxic chemicals most often encountered in the environment?

Question #8: Of the top 15 of such chemicals, how many are the subject of the Superfund laboratory studies?

Question #9: For each of them, tell us whether the agency has requested funding for such studies, if so, whether the requests were approved or disapproved, and by whom.

The National Toxicology Program (NTP) has been given the major responsibility for implementing the chemical testing portion of the Superfund program. NTP is selecting chemicals for testing from among those identified by the Environmental Protection Agency (EPA) as being present in priority hazardous waste sites. These chemicals are nominated for NTP testing by EPA, the Hazardous Waste Information Evaluation Subcommittee (HWIES) of DHSS and/or the NTP Chemical Selection Committee. The necessity, nature, and scope of testing are determined by NTP in accordance with its established procedures.

So far, on the basis of the review described above, NTP has identified 24 chemicals or classes of chemicals requiring additional testing and has already begun testing 6 of those with highest priority. An additional 4 are in the pre-testing development stage.

NTP received $4,061,000 in Fiscal Year 1983 for toxicological testing of Superfund chemicals. An additional $850,500 has been provided to NTP in Fiscal Year 1984. The FY 1985 request included $4.5 million for chemical testing; however, it was not included in the final budget. Recently, the House Congress has recommended $5.125 million for toxicological testing in Fiscal Year 1985.

Question #12: How many citizens in New Jersey have been registered? (NIOSH Dioxin Registry)

The National Institute of Occupational Safety and Health has completed its initial work at the Diamond Shamrock area in New Jersey and approximately 500 workers from that plant have now been included in the NIOSH dioxin registry. NIOSH presently is in process of adding workers at the Givaudan Chemical plant to the registry.

As additional sites are identified, consideration will be given to adding workers at these sites to the dioxin registry.

Used from Jan '83 - June '84

I.D.# / / / / / / / / / / / /

Human Health Effects Questionnaire - Missouri Division of Health

DEMOGRAPHIC

(1) Respondent Name: _____

(2) Respondent Address: _____
_____

(3) Telephone: ( ) _____

(4) Respondent Relationship to Subject: / /
1=Self
2=Spouse
3=Parent
4=Offspring
5=Other Family Member
6=Friend

(5) Please identify two individuals (relatives or friends) who will always know where to contact you:

NAME _____ NAME _____
Relationship _____ Relationship _____
Address _____ Address _____
_____ _____
Phone: ( ) _____ Phone: ( ) _____

(6) Subject's Name (include maiden name, if applicable):
_____
Last First MI

(7) Social Security Number: / / / / / / / / / / /

**** (8) Subject's Permanent Address: Current Address:
_____ _____
_____ _____

(9) Date of Birth: Mo. / / / Day / / / Yr. / / /

(10) Sex: / / 1=Male 2=Female

(11) Race: / /
1=White (Not Hispanic)
2=Black (Not Hispanic)
3=Hispanic
4=American Indian or Alaskan Native
5=Asian or Pacific Islander

Form Approved OMB No. 0920-0003
This report is authorized by law (Section 311 PHS Act) your response is voluntary.

ID: _____

(12) Education Level: / /

**** (13) Education Level of Head of Household (if different person from above): / /

Education Level Code: 1=Elementary school
2=High school
3=Some college
4=College degree
5=Graduate degree
8=Not Applicable
9=Unknown

(14) Have you ever served in the U.S. Armed Forces? / /
1=Yes 2=No 9=Unknown

If "yes", please provide the following:

(a) In what branch did you serve: / /
1=Army 2=Navy 3=Air Force 4=Marines 9=Unknown

(b) Did you serve overseas in:

Duty Location			Period of Time
World War II (Europe)	/ /	1=Yes	19 / / / / to 19 / / / /
World War II (Pacific)	/ /	2=No	19 / / / / to 19 / / / /
Korea	/ /	3=Unknown	19 / / / / to 19 / / / /
Vietnam	/ /		19 / / / / to 19 / / / /
Other (Specify _____)	/ /		19 / / / / to 19 / / / /

(c) Specify your Military Occupational Specialty: _____

EXPOSURES

(15) How long have you lived at your permanent address: / / / (yrs.)
If less than 15 years, please list other places of residence for the past 15 years:

Address	Length (yrs.)	Housing Type	Yard Available
_____	/ / /	/ / 1=Apartment	/ / 1=None
_____	/ / /	/ / 2=Multi-	/ / 2=Paved
_____	/ / /	/ / Family	/ / 3=Grass
_____	/ / /	/ / 3=Single	/ / 4=Dirt
_____	/ / /	/ / Family	/ / 9=Unknown
		9=Unknown	

ID: _____

(16) Please estimate the average amount of time and place where you most frequently participate in the following outdoor activities:

Type of Activity	Times per week (in season)	Location
Gardening or Lawn Mowing	/ / /	
Field/Court Sports (Baseball, Football, Basketball, etc)	/ / /	
Fishing	/ / /	
Swimming	/ / /	
Horseback Riding	/ / /	
Bicycling	/ / /	
Hiking	/ / /	
Playing in Soil (e.g., sandbox)	/ / /	
Other (Specify _____)	/ / /	

88=Not Applicable
99=Unknown

(17) If ever employed, please indicate (in order):

Industry	Job	SIC Code	Length(yrs.)
		/ / / / / / /	/ / /
		/ / / / / / /	/ / /
		/ / / / / / /	/ / /

**** (18) Has Head of Household (if different person from above) ever been employed in the manufacture, use, transport or disposal of chemicals (such as pesticides, fertilizers, petroleum products, etc.) or the manufacture and use of electrical equipment (such as transformers, capacitors, etc.)? /__/

1=Yes 2=No 8=Not Applicable 9=Unknown

If "Yes":

Industry	Job	SIC Code	Length(yrs.)
----------	----------	/__/__/__/__/__/__/__/	/__/__/
----------	----------	/__/__/__/__/__/__/__/	/__/__/
----------	----------	/__/__/__/__/__/__/__/	/__/__/

**** (19) What is your source of drinking water: /__/

1=Public system
2=Private well or spring
3=Other (specify _____)
9=Unknown

If other than public or other sources in past, please indicate:

Source	Length(yrs.)
/__/	/__/__/
/__/	/__/__/
/__/	/__/__/

(20) Have you ever consumed any game animals or fish caught in the local area? /__/ 1=Yes 2=No 3=Unknown

If "yes", please indicate:

Animal or fish	Code	Where Caught	Average # Times Per Month
	/__/		/__/__/
	/__/		/__/__/
	/__/		/__/__/
	/__/		/__/__/
	/__/		/__/__/

ID: _____

FOR QUESTIONS 21-24: 1=Yes 2=No 9=Unknown

**** (21) Do you subscribe to any type of pest control service for inside your home (such as Orkin, Terminex, etc.)? /__/

**** (22) Do you subscribe to any chemical services for the outdoor part of your home (such as Chem-Lawn)? /__/

**** (23) Have you used any bug sprays or other such chemicals inside your house since you have lived here? /__/

**** (24) Have you used any bug sprays, weed killers, or other such chemicals under or outside your house since you have lived here? /__/

LIFE STYLE HABITS

(25) (a) Did you ever drink alcoholic beverages: / / 1=Yes 2=No 9=Unknown
[If "no", go to question number 26]

(b) Do you now drink alcoholic beverages? / / 1=Yes 2=No 9=Unknown

(c) If "yes" to either, on the average, how often do you consume the following:

Can of beer	/ /	1=Less than once a month
Glass of wine	/ /	2=1-3 times per month
Shot of whiskey	/ /	3=Once per week
		4=2-5 times per week
		5=Once per day or more
		9=Unknown

(d) On average, what is your total number of drinks per month: / / / /

(e) At what age did you begin drinking alcoholic beverages regularly?
/ / / Years of age

(26) (a) Did you ever smoke or use tobacco products? / / 1=Yes 2=No 9=Unknown
[If "no", go to question number 27]

(b) Do you now smoke or use tobacco products? / / 1=Yes 2=No 9=Unknown
If "no", how long ago did you quit? / / / (yrs.)

(c) If "yes" to either (a) or (b), on the average, how much do you use the following:

Cigarettes	/ / /	
Cigars	/ / /	
Cigarillos	/ / /	(Number per day)
Pipes	/ / /	
Chewing Tobacco	/ / /	(Ounces per day)

(d) At what age did you start smoking? / / / (yrs. old)

ID: _____

(27) Do you regularly eat vegetables from your own or your neighbors gardens: / / 1=Yes 2=No 9=Unknown
If "yes", (a) How often per week: / / /
(b) What kinds:

			Where Grown
Root Vegetables (e.g., Radishes, Onions, Potatoes, Turnips, etc.)	/ /	1=Yes	_____
Ground Vines (e.g., Squash, Watermelon, etc.)	/ /	2=No	_____
Leafy Plants (e.g., Lettuce, Greens, etc.)	/ /	9=Unknown	_____
Upright Plants (e.g., Tomatoes, Corn, Beans, etc.)	/ /		_____

(c) What types of fertilizers were used on these gardens?

TYPE	WHEN & WHERE OBTAINED
Synthetic (e.g., Scott's, Ortho, etc.)	_____
Organic (e.g., manure, compost pile, treated sewage sludge)	_____

(28) (a) Do you regularly participate in exercise activities? / / 1=Yes 2=No 9=Unknown
(b) If "yes", please specify type of exercise: / /
1=Extremely strenuous (e.g., marathon running, long distance swimming, etc.)
2=Strenuous (e.g., tennis, jogging, etc.)
3=Mild (e.g., golf, walking, etc.)
(c) How many times per week do you exercise as indicated above? / / /

MEDICAL HISTORY

HAVE YOU BEEN SEEN BY A DOCTOR OR HOSPITALIZED FOR THE FOLLOWING IN THE PAST 10 YEARS:
[Code for Questions 29-38: 1=Yes 2=No 8=Not Applicable 9=Unknown]

(29) Heart Condition
(a) High Blood Pressure / /
(b) Other heart disease / /

(30) Liver or Related Problems
(a) Hepatitis B / /
(b) Hepatitis (other than Type B) / /
(c) Jaundice / /
(d) Cirrhosis / /
(e) Gall Bladder Disease / /
(f) Other Liver Disease (Specify) / /

ID: _____

(31) Urinary Problems
- (a) Nephritis / /
- (b) Urinary Tract Infection / /
- (c) Cystitis / /
- (d) Kidney Stones / /
- (e) Blood in the Urine / /
- (f) Protein in the Urine / /
- (g) Other Kidney Disease (Specify) / /

(32) Skin Problems
- (a) Psoriasis / /
- (b) Dermatitis / /
- (c) Eczema / /
- (d) Acne in adolescent years / /
- (e) Acne (other than in adolescent years) / /
- (f) Darkening of skin & nails (except for tanning) / /
- (g) Enlargement of eyebrows / /
- (h) Excess growth of hair on shoulders, upper back, or chest around nipples / /
- (i) Other (Specify) / /

(33) Blood Problems
- (a) Anemia or Low Red Blood Count / /
- (b) Low White Blood Count / /
- (c) Blood Clotting Problem / /
- (d) Other (Specify) / /

(34) Eye Problems
- (a) Cataracts / /
- (b) Eye infections or "red eye" / /
- (c) Chronic excessive irritation / /

(35) Nervous System Problems
- (a) Seizures, Fits, Epilepsy / /
- (b) Stroke
- (c) Weakness or Paralysis in Arms or Legs / /
- (d) Tremors / /
- (e) Dizziness / /
- (f) Mental Illness / /
- (g) Chronic Memory Loss / /
- (h) Recent personality or major temperament changes / /
- (i) Other (Specify) / /

(36) Generalized Disorders
- (a) Swelling in hands or feet / /
- (b) Loss of more than 10 punds in one month (while not on a diet) / /
- (c) Persistent headaches / /
- (d) Joint and/or muscle pain / /
- (e) Diabetes / /
- (f) Thyroid disease / /
- (g) Immune deficiencies or other immune disorders / /
- (h) Repeated or markedly prolonged infections (Specify)
- (i) Other (Specify) / /

ID: _____

(37) Cancer / /
** If "yes" to the above general category, please answer for all of the detailed conditions listed below.**

(a) Skin / /
(b) Throat / /
(c) Lung / /
(d) Stomach / /
(e) Bowel or Colon / /
(f) Rectum / /
(g) Prostate / /
(h) Breast / /
(i) Cervix / /
(j) Uterus / /
(k) Leukemia or Lymphoma (such as Hodgkins Disease) / /
(l) Liver / /
(m) Bladder / /
(n) Brain / /
(o) Sarcomas / /
(p) Other (Specify) / /

(38) Reproductive Health Problems
MALE RESPONDENTS:

(a) Infertility / /
(b) Impotence / /
(c) Loss of sex drive / /

FEMALE RESPONDENTS:

(a) Irregular Menses / /
(b) Chronic Excessive Menstrual Flow / /
(c) No Menstrual Flow / /
(d) Infertility / /

(e) Age at Menarche / / / (Years of
(f) Age at Menopause / / / / age)

(g) If ever pregnant, please indicate the following:

Pregnancy #	Name	Date Mo. Date Yr.	Outcome*	Birth Defect Type	Hospital	Obstetrician
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____
—	_____	/ / / / / /	/ /	_____	_____	_____

*Codes for outcomes are: 1=Live Birth 2=Stillborn 3=Spontaneous Abortion or Miscarriage 4=Therapeutic or Induced Abortion 9=Unknown

ID: _____

(39) If "Yes" to any of the conditions in Questions 29-39, please indicate:

Condition #	Name of Physician	Address	Year Diagnosed

(40) Do you NOW take any of the following medicines: 1=Yes 2=No 9=Unknown

None Taken in the past year / /
Blood Pressure Medicines / /
Other Heart Medicines / /
Anti-histamines / /
Blood thinning drugs / /
Long-term Antibiotics / /
Cortisone or related drugs / /
Diabetes Pills or Insulin / /
Sleeping Pills / /
Birth Control Pills / /
Multiple Vitamin Supplements / /
Thyroid Replacement Hormones / /
Muscle Relaxants / /
Sedatives or Tranquilizers / /
Radiation Therapy / /
Other (Specify _____) / /

(If "yes" to any of the above, ask to see prescription bottle(s); then specify:)

Drug Taken	Dose	Length of time taken to present

ID: _____

(41) If you are the head of your household, please list the following information for any individuals who have resided at your home for more than a continuous six month period during the past 15 years:

Name	Period of time resided with you
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___
_____	19 ___ to 19 ___

(42) Please list your approximate weight (in pounds) for the following time periods:

Time Period	Weight (in pounds)
10 years ago	
5 years ago	
1 year ago	
At present	

FAMILY PETS

(43) Do you currently have any pets which have lived at your permanent address? / / 1=Yes 2=No

(44) For each pet, please indicate how long it has lived at your permanent address and approximately how many hours it spends outdoors each day.

Animal Number	Type of Pet		No. Years at Permanent Address	No. Hours Outdoors Daily
1		1=Dog		
2		2=Cat		
3		3=Other (Specify _____)		
4				
5				

Dr. _____

(43) In the past 12 years, has a veterinarian treated any of your pets for the following?

	Animal Number					
	1	2	3	4	5	
1. Heart problems	☐	☐	☐	☐	☐	(1=Yes
2. Liver or related problems	☐	☐	☐	☐	☐	2=No
3. Urinary problems	☐	☐	☐	☐	☐	3=Unknown
4. Skin problems	☐	☐	☐	☐	☐	
5. Blood problems	☐	☐	☐	☐	☐	
6. Eye problems	☐	☐	☐	☐	☐	
7. Nervous system problems	☐	☐	☐	☐	☐	
8. Cancer	☐	☐	☐	☐	☐	
9. Other (specify)	☐	☐	☐	☐	☐	

(44) If "yes", to any of the conditions in Question (5), please provide:

Animal Number	Condition Number	Name & address of Veterinarian	Year Treatment Given	Specific Diagnosis if Known
___	___	_____	_____	_____
___	___	_____	_____	_____
___	___	_____	_____	_____
___	___	_____	_____	_____
___	___	_____	_____	_____

(47) Would you agree to further investigations of your pet's health problems, if appropriate, at a later date? ☐ (1=Yes 2=No

(48) Have previous owners of yours ever given you these previous pet problems?

(49) To your knowledge, has any part of your yard or nearby areas (work or neighbor's property or public roadway) ever been sprayed for noxious pesticides or other chemical contamination? ☐ (1=Yes 2=No 3=Unknown

If "yes", please indicate:

Location of Spraying	The Chemical Sprayed (e.g., DDT or Unsure Chemical)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(50) (a) Have you ever been told by a physician that you suffer from a chemical-related conditions (e.g., skin problems)? ☐ (1=Yes 2=No 3=Unknown

(b) If "yes", are you currently under care for a chemical-related problem? ☐ (1=Yes 2=No 3=Unknown
(Please give name of physician _____)

(c) Have you ever been given a ticket or fine for a state law? ☐ (1=Yes 2=No 3=Unknown

ID: _____

Coosent Form

The Missouri Division of Health and the Centers for Disease Control (CDC) are conducting interviews among Missouri residents to determine the extent and nature of health effects which may be related to exposure to environmental TCDD (dioxin) contaminations. There is no treatment for such exposures at the present time nor is it certain what levels may cause illness. This study is not primarily designed to provide immediate health benefit to the people who participate, but the knowledge gained should help us learn more about the human health effects of TCDD exposures. Participation is voluntary, free of charge and will only include answering questions. The questions concern possible exposures to TCDD and other substances, your health and your habits. Some questions concern gynecological problems and fertility because the effect of such chemicals on human reproduction is being studied. You do not have to answer these questions if you consider them too sensitive.

The doctors conducting the study will not be able to provide medical care or evaluation for any problems that may be found. However, in such situations individuals will be referred and tracked to appropriate health care providers in the study area.

Your name will not be used in any published report of this study; however, your file may be made available to cooperating medical authorities. In addition, a central data file may be established so that newer information on dioxin can be provided to participants when available and so that long-term effects, if any, can be investigated. Therefore, your social security number and other information requested will be useful in helping to locate you in the future, but you are not required to give this information.

In order to verify details concerning health effects identified in study participants, the investigators may wish to have access to your personal medical records. Also, it would be of great help if public health investigators were permitted access to results of any private environmental sampling, if available.

Further information concerning the study can be obtained from:

Dr. Henry Falk
Center for Environmental Health
Centers for Disease Control
1600 Clifton Road, N.E.
Atlanta, Georgia 30333
(Telephone 404-452-4161)

OR

Dr. H. Denny Donnell, Jr.
Missouri Division of Health
1511 Christy Drive
Jefferson City, Missouri 65102
(Telephone 314-751-2713)

I have read, or been read, the description above and voluntarily consent to participate in the study. I also agree to permit investigators to have access to my private medical records and copies of available results of private environmental samples, if needed. I understand that I can withdraw at any time from participation.

_____ _____
DATE SIGNATURE OF SELF OR GUARDIAN

_____ Initial here if willing to release medical records for review.

_____
Signature of Investigator/Witness

1 copy for participant/1 copy for record

ATTACHMENT 2

II Used from June '89 to present REVISED

774

I.D. NUMBER: /8/4/__/__/__/__/__/__/__/

Dioxin Health Effects Questionnaire — Missouri Division of Health

Demographic

For Office Use Only	
Medical Exam #	/_/_/_/_/_/_/_/_/
Interviewer #	/_/_/
Date of Interview	/_ _/_ _/_ _/_ _/
Dioxin Site	/_/_/
Match I.D. #	/_/_/_/_/

(1) Respondent Name: _____ (Last) _____ (First) _____ (MI)

(2) Respondent Address: _____ (Street)

_____ (City or Town) _____ (State) _____ (Zip Code)

(3) Telephone: ( ) _____ (Area Code)

(4) Please identify two individuals (relatives or friends) who will always know where to contact the respondent:

(A) Name: _____ (Last) _____ (First) _____ (MI)

/__/ Relationship to respondent: _____

Address: _____ (Street)

_____ (City or Town) _____ (State) _____ (Zip Code)

Telephone: ( ) _____ (Area Code)

(B) Name: _____ (Last) _____ (First) _____ (MI)

/__/ Relationship to respondent: _____

Address: _____ (Street)

_____ (City or Town) _____ (State) _____ (Zip Code)

( ) _____ (Area Code)

(5) Respondent's Relationship to Subject: /__ /

1 = Self
2 = Spouse
3 = Parent
4 = Son or Daughter
5 = Other Family Member
6 = Friend

(6) Subject's Name: _____
(Last) (First) (MI) (Suffix)

Maiden Name: _____

(7) Subject's Social Security Number: /__/__/__/ - /__/__/ - /__/__/__/__/

(8) A. Is the subject the head of household? /__/ *(1 = Yes 2 = No 9 = Unknown)*

B. If "No", then give name of head of household: _____
(Last) (First) (MI)

/__/__/__/__/

(9) Subject's current address: _____
(Street)

_____
(City or Town) (State) (Zip Code)

(10) Subject's date of birth: Month /__/__/ Day /__/__/ Year /__/__/

(11) Subject's sex: /__/ *1 = Male 2 = Female*

(12) Subject's race: /__/
1 = White (non-Hispanic)
2 = Black (non-Hispanic)
3 = Hispanic
4 = American Indian or Alaskan Native
5 = Asian or Pacific Islander
9 = Unknown

(13) Subject's educational level: /__/

(14) Education level of head of household: /__/

1 = Elemsntary (0 - 6 yrs.)
2 = Junior High (7 - 8 yrs.)
3 = Partial High School
4 = High School Graduate
5 = Partial College (1 - 3 yrs.)
6 = Standard College or university graduate
7 = Graduate Professional Degree
8 = Not Applicable
9 = Unknown

Medical History

(15) What is the name and address of your current doctor for routine general medical care?

Physician Code	Name of Physician	Physician's Address
/_/_/_/_/_/_/_/	_____	_____

Since 1971, has the subject been told by a doctor that he/she has had any of the following conditions?
(Codes for questions 16 - 24: *1 = Yes 2 = No 9 = Unknown)*

(16) Heart Condition

			Year of Diagnosis
	/__ / (A)	High blood pressure	/__ /__ /
	/__ / (B)	Other heart disease	/__ /__ /

(17) Liver or Related Problems

			Year of Diagnosis
*	/__ / (A)	Enlarged Liver	/__ /__ /
*	/__ / (B)	Porphyria	/__ /__ /
	/__ / (C)	Hepatitis B	/__ /__ /
	/__ / (D)	Other Hepatitis	/__ /__ /
	/__ / (E)	Jaundice	/__ /__ /
	/__ / (F)	Gall bladder disease	/__ /__ /
	/__ / (G)	Other liver disease	/__ /__ /
	/__ /	Specify: _____	

(18) Urinary Problems

			Year of Diagnosis
*	/__ / (A)	Nephritis	/__ /__ /
*	/__ / (B)	Cystitis	/__ /__ /
	/__ / (C)	Blood in the urine	/__ /__ /
	/__ / (D)	Urinary tract infection	/__ /__ /
	/__ / (E)	Kidney stones	/__ /__ /
	/__ / (F)	Protein in the urine	/__ /__ /
	/__ / (G)	Other kidney disease	/__ /__ /
	/__ /	Specify: _____	

*Conditions that will require physician's name and address on question 25.

			Year of Diagnosis
(19) Skin Problems			
*	/__/ (A)	Chloracne	/__/__/
*	/__/ (B)	Acne (other than adolescent years)	/__/__/
	/__/ (C)	Acne (adolescent years)	/__/__/
	/__/ (D)	Psoriasis	/__/__/
	/__/ (E)	Dermatitis	/__/__/
	/__/ (F)	Other skin problems	/__/__/
	[/__/]	Specify: _____	
(20) Blood Problems			
	/__/ (A)	Anemia or low red blood count	/__/__/
	/__/ (B)	Low white blood count	/__/__/
	/__/ (C)	Blood clotting problems	/__/__/
	/__/ (D)	Other blood problems	/__/__/
	[/__/]	Specify: _____	
(21) Eye Problems			
	/__/ (A)	Cataracts	/__/__/
	/__/ (B)	Eye infections or "Pink eye"	/__/__/
	/__/ (C)	Other eye problems	/__/__/
	[/__/]	Specify: _____	
(22) Nervous System Problems			
*	/__/ (A)	Neuritis	/__/__/
	/__/ (B)	Seizures, fits, epilepsy	/__/__/
	/__/ (C)	Other nervous system problems	/__/__/
	[/__/]	Specify: _____	
(23) Miscellaneous Disorders			
*	/__/ (A)	Immune deficiencies	/__/__/
*	/__/ (B)	Gastric (stomach) ulcer	/__/__/
*	/__/ (C)	Depression	/__/__/
	/__/ (D)	Mental illness	/__/__/
	/__/ (E)	Diabetes	/__/__/
	/__/ (F)	Thyroid disease	/__/__/
	/__/ (G)	Other miscellaneous disorders	/__/__/
	[/__/]	Specify: _____	

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(24) Cancer

/___/ *(1 = Yes 2 = No 9 = Unknown)*
If No, skip to question 25.

If "Yes" to above general category, please specify which site(s) with a "1" marked below, along with the year of diagnosis. *Leave other site(s) and years blank.*

			Year of Diagnosis
*	/___/ (A)	Skin	/___/___/
*	/___/ (B)	Throat	/___/___/
*	/___/ (C)	Lung	/___/___/
*	/___/ (D)	Stomach	/___/___/
*	/___/ (E)	Bowel or Colon	/___/___/
*	/___/ (F)	Rectum	/___/___/
*	/___/ (G)	Prostate	/___/___/
*	/___/ (H)	Breast	/___/___/
*	/___/ (I)	Cervix	/___/___/
*	/___/ (J)	Uterus	/___/___/
*	/___/ (K)	Leukemia or lymphoma (such as Hodgkins disease)	/___/___/
*	/___/ (L)	Liver	/___/___/
*	/___/ (M)	Bladder	/___/___/
*	/___/ (N)	Brain	/___/___/
*	/___/ (O)	Sarcomas (Soft tissue)	/___/___/
*	/___/ (P)	Other Cancer	/___/___/
	[/___/]	Specify: _____	

Comments: _____

_____

_____

_____

*Conditions that will require physician's name and address on question 25.

(25) If any conditions in Questions 16 - 24 are answered "yes" and flagged by an asterisk, please complete the following:

Condition Number	For Office Use Only Physician Code	Name of Physician	Physician's Address
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____
/__/__/__/	/__/__/__/__/__/__/__/	_____	_____

(26) Has the subject had any of the following symptoms in the last 12 months, and if so, has he/she seen a doctor?
(1 = Yes 2 = No 9 = Unknown) (Coding: If symptom = "No" then leave second column blank)

Has subject had symptom?	Has subject seen a doctor for symptom?	
/__/	/__/	(A) Darkening of skin and nails (except for tanning)
/__/	/__/	(B) Enlargement of eyebrows
/__/	/__/	(C) Excessive growth of hair on shoulders, upper back, or chest around nipples
/__/	/__/	(D) Chronic excessive eye irritation
/__/	/__/	(E) Tremors

Symptom?	Doctor?	
/__ /	/__ /	(F) Numbness in hands/feet
/__ /	/__ /	(G) Pins and needles in hands/feet
/__ /	/__ /	(H) Dizziness
/__ /	/__ /	(I) Chronic memory loss
/__ /	/__ /	(J) Unintentional (not dieting) loss of more than 15 pounds in three months
/__ /	/__ /	(K) Persistent severe headaches
/__ /	/__ /	(L) Persistent fever
/__ /	/__ /	(M) Joint and/or muscle pain
/__ /	/__ /	(N) Repeated or markedly prolonged infections
/__ /		Specify: _____

(27) Reproductive Health Problems

Has subject seen a doctor for any of the following symptoms since 1971?
(1 = Yes 2 = No 9 = Unknown)

Female Subjects		Year of Diagnosis	Male Subjects		Year of Diagnosis
Symptom?			Symptom?		
/__ /	(A) Irregular periods	/__ /__ /	/__ /	(A) Infertility*	/__ /__ /
/__ /	(B) Chronic excessive menstrual flow	/__ /__ /	/__ /	(B) Impotence	/__ /__ /
/__ /	(C) No menstrual flow	/__ /__ /	/__ /	(C) Loss of sex drive	/__ /__ /
/__ /	(D) Infertility*	/__ /__ /			

*No success in achieving a pregnancy in two years when neither partner was using a method of birth control.

(E) If subject was ever pregnant, please indicate the following:

Pregnancy Number	Date of Birth/ Pregnancy Termination Mo / Day / Year	*Outcome	First Name of Child	Birth Defect Type (if any)	Hospital
1.	/__ __/__ __/__ __/	/__/	_____	_____	_____
2.	/__ __/__ __/__ __/	/__/	_____	_____	_____
3.	/__ __/__ __/__ __/	/__/	_____	_____	_____
4.	/__ __/__ __/__ __/	/__/	_____	_____	_____
5.	/__ __/__ __/__ __/	/__/	_____	_____	_____
6.	/__ __/__ __/__ __/	/__/	_____	_____	_____
7.	/__ __/__ __/__ __/	/__/	_____	_____	_____
8.	/__ __/__ __/__ __/	/__/	_____	_____	_____

*Codes for outcomes are: *1 = Live Birth*, *2 = Stillborn*, *3 = Spontaneous abortion or miscarriage*, *4 = Therapeutic or induced abortion*, *5 = Infant death*, *9 = Unknown*

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Pregnancy Number	Birth Defect Type	Hospital Code	Pregnancy Number	Birth Defect Type	Hospital Code
1.	/__/__/__/__/	/__/__/__/__/__/	5.	/__/__/__/__/	/__/__/__/__/__/
2.	/__/__/__/__/	/__/__/__/__/__/	6.	/__/__/__/__/	/__/__/__/__/__/
3.	/__/__/__/__/	/__/__/__/__/__/	7.	/__/__/__/__/	/__/__/__/__/__/
4.	/__/__/__/__/	/__/__/__/__/__/	8.	/__/__/__/__/	/__/__/__/__/__/

(28) Does the subject now take any of the following medicines? *(1 = Yes 2 = No 9 = Unknown)*

(A) Blood pressure medicines...../__/
(B) Other heart medicines...../__/
(C) Anti-histamines...../__/
(D) Blood-thinning drugs...../__/
(E) Long-term antibiotics...../__/
(F) Cortisone or related drugs..../__/
(G) Diabetes pills or insulin...../__/
(H) Sleeping pills...../__/
(I) Birth control pills...../__/
(J) Multiple vitamin supplements../__/
(K) Thyroid replacement hormones../__/
(L) Muscle relaxants...../__/
(M) Sedatives or tranquilizers..../__/
(N) Radiation therapy...../__/
(O) Other...../__/

(If "Yes" to any medicines, ask to see bottles and specify:)

Drug Taken	Dose	Length of Time Taken to Present

Specify: /__/ _____

(29) ***Since 1971 has anyone who lived in subject's household for six months or longer died? /__/
(Needs to be answered only by the head of household) *(1 = Yes 2 = No 9 = Unknown)*

If Yes: 1. Name of deceased: _____ Age at death (years): /__/__/
Last First MI

Date of death: Month Day Year /__ __/__ __/__ __/

Location of death: _____ _____ /_/_/_/_/_/ /_/_/
City State

Cause of death: _____ /__ /__ /__ /__ /__ /

Date(s) when person lived with subject: /__ /__ / /__ /__ /
Beginning year Ending year

2. Name of deceased: _____ Age at death (years): /__/__/
Last First MI

Date of death: Month Day Year /__ __/__ __/__ __/

Location of death: _____ _____ /_/_/_/_/_/ /_/_/
City State

Cause of death: _____ /__ /__ /__ /__ /__ /

Date(s) when person lived with subject: /__ /__ / /__ /__ /
Beginning year Ending year

Life Style Habits

(30) (A) Has subject smoked more than 100 cigarettes in his/her entire life? /___ /
(1 = Yes 2 = No 9 = Unknown)
If "No", go to question #31.

(B) Does subject smoke cigarettes now? /___ / *(1 = Yes 2 = No 9 = Unknown)*
If no, at what age did subject quit smoking? /___ /___/

(C) How old was subject when he/she started smoking? /___ /___ /

(D) How many years has subject smoked? /___ /___ /

(E) Average number of packs smoked per day? /___ / *(0 = Less than 1 pack per day)*

(F) Has subject ever regularly used pipes, cigars, chewing tobacco, or snuff, for a period of six months or longer? /___ / *(1 = Yes 2 = No 9 = Unknown)*

(31) (A) If a drink is a can of beer, a glass of wine, a cocktail, or a shot of whiskey, has the subject had more than ten (10) drinks in his/her life time? /___ / *(1 = Yes 2 = No 9 = Unknown)*

If "No", go to question #32.

(B) Does subject drink now? /___ / *(1 = Yes 2 = No 9 = Unknown)*
If no, at what age did subject quit drinking? /___ /___ /

(C) How old was subject when he/she started drinking? /___ /___ /

(D) How many years has subject drunk? /___ /___ /

(E) Average number of drinks per week. /___ /___ / *(00 = Less than 1 drink per week)*

(32) Which statement best describes the subject's current frequency of physical activity? (Physical activity includes running, lifting, or carrying and lasts for at least 20 minutes.)

/___ / *1 = 0 - 3 times per month* *3 = 3 or more times per week*
2 = 1 - 2 times per week *9 = Unknown*

Briefly describe the physical activities the subject participates in. _____

/___/___/ _____

*** Currently Owned Pets (needs to be answered only by the head of household)

(33) Does the subject currently own any pets that live on the property where his/her home is? /___/
(1 = Yes 2 = No 9 = Unknown)
If "No", go to question #38.

(34) For each pet, please indicate the following:

Animal Number	Type of animal		Age		Number of hours Outdoors daily		Was pet confined to subjects property?	
1.	/___/	*1 = Dog*	/___/___/	*99 = Unknown*	/___/___/	*99 = Unknown*	/___/	*1 = Yes*
2.	/___/	*2 = Cat*	/___/___/	*00 = Less than 1 year*	/___/___/	*88 = N/A*	/___/	*2 = No*
3.	/___/	*3 = Cow*	/___/___/		/___/___/	*00 = Less than 1 hour*	/___/	*9 = Unknown*
4.	/___/	*4 = Horse*	/___/___/		/___/___/		/___/	
5.	/___/	*5 = Other*	/___/___/		/___/___/		/___/	

(35) Since 1971, has a veterinarian treated any of the subject's current pets for the following:
(1 = Yes 2 = No 9 = Unknown)

Condition	Animal Number 1	2	3	4	5
1. Heart problems	/___/	/___/	/___/	/___/	/___/
2. Liver or related problems	/___/	/___/	/___/	/___/	/___/
3. Urinary problems	/___/	/___/	/___/	/___/	/___/
4. Skin problems	/___/	/___/	/___/	/___/	/___/
5. Blood problems	/___/	/___/	/___/	/___/	/___/
6. Eye problems	/___/	/___/	/___/	/___/	/___/
7. Nervous system problems	/___/	/___/	/___/	/___/	/___/
8. Cancer	/___/	/___/	/___/	/___/	/___/
9. Other	/___/	/___/	/___/	/___/	/___/

Specify: _____

/___/

(36) If "Yes" to any of the conditions in Question #35, please provide:

Pet Number	Condition Number	Veterinarian's Name	Veterinarian's Address	Specific Diagnosis if known	Yr. Treatment Began
/__/	/__/	_____	_____	_____	/__ /__ /
/__/	/__/	_____	_____	_____	/__ /__ /
/__/	/__/	_____	_____	_____	/__ /__ /
/__/	/__/	_____	_____	_____	/__ /__ /
/__/	/__/	_____	_____	_____	/__ /__ /

For office use only:	Pet Number:	Diagnosis:	Vet ID:
	/__/	/__/__/__/__/	/__/__/__/__/__/__/__/
	/__/	/__/__/__/__/	/__/__/__/__/__/__/__/
	/__/	/__/__/__/__/	/__/__/__/__/__/__/__/
	/__/	/__/__/__/__/	/__/__/__/__/__/__/__/
	/__/	/__/__/__/__/	/__/__/__/__/__/__/__/

(37) Would the subject agree to further investigation of pet's health problems? /___ / *(1 = Yes 2 = No 9 = Unknown)*

(38) ***Deceased Pets (needs to be answered only by the head of household)

/___ / A) Have any pets that subject owned died since 1971? *(1 = Yes 2 = No 9 = Unknown)*
(If "No", then go to question 39)

B) For each pet that died, answer the following questions. If more than five pets died, choose five that are representative. If any category is "other," please specify in comments.

Pet Number	Type of Pet	Age (Years)	No. Hours Outdoors Daily	Confined to Subject's Property	Nature of Death	Major Health Problem	Comments
1.	/__/	/__/__/	/__/__/	/__/	/__/	/__/	_____
2.	/__/	/__/__/	/__/__/	/__/	/__/	/__/	_____
3.	/__/	/__/__/	/__/__/	/__/	/__/	/__/	_____
4.	/__/	/__/__/	/__/__/	/__/	/__/	/__/	_____
5.	/__/	/__/__/	/__/__/	/__/	/__/	/__/	_____
	1 = Dog *2 = Cat* *3 = Cow* *4 = Horse*	*00 = Less than 1 year* *99 = Unknown*	*00 - 24 hrs.* *99 = Unknown*	*1 = Yes* *2 = No* *9 = Unknown*	*1 = Disease* *2 = Accident* *3 = Other*	*1 = Heart* *2 = Liver* *3 = Urinary* *4 = Skin*	*5 = Blood* *6 = Eye* *7 = Nervous System* *8 = Cancer* *9 = Other* *& = Unknown* *0 = None*

ATTACHMENT 2

Pet Number	Year of Death	Veterinarian's Name	Veterinarian's Address	Specific Diagnosis if Known
1.	/_/_/	_____	_____	_____
2.	/_/_/	_____	_____	_____
3.	/_/_/	_____	_____	_____
4.	/_/_/	_____	_____	_____
5.	/_/_/	_____	_____	_____

Comments: _____

_____

_____

_____

For office use only:	Pet Number:		Diagnosis:	Vet ID:
		1.	/_/_/_/_/	/_/_/_/_/_/_/_/_/
		2.	/_/_/_/_/	/_/_/_/_/_/_/_/_/
		3.	/_/_/_/_/	/_/_/_/_/_/_/_/_/
		4.	/_/_/_/_/	/_/_/_/_/_/_/_/_/
		5.	/_/_/_/_/	/_/_/_/_/_/_/_/_/

Exposure Questions

(39) ***Have any pest control services been used inside the home (such as Orkin, Terminex, etc.) in the last five years? *(1 = Yes 2 = No 9 = Unknown)*

(40) ***Has the head of household subscribed to any chemical services (Chem-Lawn, etc.) in the last five years?
/___/ *(1 = Yes 2 = No 9 = Unknown)*

(41) ***How many cans of bug spray or other such chemicals are used in the house each year?
/___/___/

(42) Has the subject used any wood preservatives in the last five years? *(1 = Yes 2 = No 9 = Unknown)*
/___/

(43) If the subject was ever employed, please indicate (starting with most recent job):

Industry	Job	For Office Use Only Census Code	Year Started	Year Ended	Length of Employment Unit Type (0 = Year, 1 = Month)	Length of Employment Units	Chemical Employment* (1 = Yes, 2 = No, 9 = Unk)
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/
_____	_____	/_/_/_/_/_/_/	/_/_/	/_/_/	/_/	/_/_/	/_/

*Did this job involve the manufacture, use, transport or disposal of chemicals (such as pesticides, fertilizers, petroleum products, etc.) or the manufacture and use of electrical equipment (such as transformers, capacitors, etc.) or the incineration of plastic or wood materials?

***To be answered only by the head of household

(44) Has any other member of subject's current household been involved in chemical employment as defined above?
/__/ *(1 = Yes 2 = No 9 = Unknown)*

(45) (A) Did subject serve in the U.S. Armed Forces in Southeast Asia? /__/ *(1 = Yes 2 = No 9 = Unknown)*
If "No", skip to question #46.

(B) What dates did he/she serve in Southeast Asia (mo/yr)?
/__ __ / /__ __ / to /__ __ / /__ __ /
month year month year

(C) Was subject involved in defoliant (herbicide spraying) operations or did he/she operate in defoliated areas in Southeast Asia? *(1 = Yes 2 = No 9 = Unknown)*
/__/

(46) List subject's place(s) of residence since 1971, starting with most recent:

	(Street) (Town) (State)	Beginning Year	Ending Year	Length of Residence: Unit Type	Length of Residence: Units	Housing Type
Current address:	_____	/__/__/	/__/__/	/__/	/__/__/	/__/
Next most recent address:	_____	/__/__/	/__/__/	/__/	/__/__/	/__/
2nd most recent:	_____	/__/__/	/__/__/	/__/	/__/__/	/__/
3rd most recent:	_____	/__/__/	/__/__/	/__/	/__/__/	/__/
4th most recent:	_____	/__/__/	/__/__/	/__/	/__/__/	/__/

Unit Type
0 = Year
1 = Month

Housing Type
1 = Mobile Home
2 = Other
9 = Unknown

/__/__/

(47) (A) Has the subject engaged in any soil contact activities at a potential dioxin site since 1971?
/___/ *(1 = Yes 2 = No 9 = Unknown)*

If "No" or "Unknown", go to question #48.

(B) Please indicate frequency and location of subject's activities at the dioxin site.
Times per week should be averaged over the April - October time period.

Type of Activity	Average Times/Week	Number of Years (seasons)	Dioxin Site (be specific)	For Office Use Only
Gardening.....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Lawn Mowing.....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Field Sports (e.g., baseball)	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Horseback Riding.....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Bicycling.....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Hiking, Walking, Jogging....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Working, Playing in Soil.... (other than gardening)	/__/__/	/__/__/	_____	/_/_/_/_/_/_/
Other Soil Contact (specify below).....	/__/__/	/__/__/	_____	/_/_/_/_/_/_/

_____

/__ /__ /

Average times/ week:

00 = Less than once/week
88 = Never
99 = Unknown

Number of Years:

00 = Less than one
88 = Not Applicalbe
99 = Unknown

(48) (A) Since 1971 has the subject eaten any fish caught in Spring River within ten miles of Verona or in the Meramec River downstream from Times Beach? /___/ *(1 = Yes 2 = No 9 = Unknown)*
If "Yes", please indicate:

Fish Type	Code	Average Times per Month	Number of Years		River Location (be specific) (e.g. 1 mile downstream from Verona)
_____	/__/	/__/__/	/__/__/	/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/	_____

00 = Less than once/month
99 = Unknown

(B) Since 1971, has the subject eaten any game caught near a dioxin site? /__/ *(1 = Yes 2 = No 9 = Unknown)*
If "Yes", please indicate:

Game	Code	Average Times per Month	Number of Years		Place Caught (be specific)
_____	/__/	/__/__/	/__/__/	/__/__/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/__/__/	_____
_____	/__/	/__/__/	/__/__/	/__/__/__/__/__/__/	_____

00 = Less than once/month
99 = Unknown

(49) Has the subject obtained and eaten any dairy products from farms where dioxin has been found? /__ /

(1 = Yes 2 = No 9 = Unknown)

If Yes, please indicate following:

Product (milk, eggs, cheese, etc.)	Code	Average Times per Month	Number of Years		Farm obtained from (be specific)
_____	/__ /	/__ /__ /	/__ /__ /	/__ /__ /	_____
_____	/__ /	/__ /__ /	/__ /__ /	/__ /__ /	_____

00 = Less than once/month
99 = Unknown

(50) Since 1971, has the subject regularly eaten vegetables from a garden near a dioxin site? /__/

(1 = Yes 2 = No 9 = Unknown)

If "Yes", please indicate the following:

	Times per week	No of Years		(address and distance [feet] from street)
(A) Root Vegetables (radishes, potatoes, etc.)	/__/__/	/__/__/	/__/__/__/__/	_____
(B) Other Vegetables	/__/__/	/__/__/	/__/__/__/__/	_____

00 = Less than once/week
99 = Unknown

(C) Did garden contain organic fertilizer obtained from horse stables? /__/ *(1 = Yes 2 = No 9 = Unknown)*
If "yes", specify stable /__/__/ _____

Exposure Codes For Office Use Only: /__ /__ /__ /__ /__ /

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Question #11: "I would appreciate it if you could provide for the record a sample of the Missouri health form that you use there and how often these forms are updated, so we can get some idea what it is that is taking place."

Two versions of the Missouri questionnaire are attached, the original and a revision. There are no plans to change the second version in the forseeable future.

TESTIMONY

OF

ELLEN K. SILBERGELD, Ph.D.

Chair, Toxic Chemicals Program
ENVIRONMENTAL DEFENSE FUND

The Environmental Defense Fund, a national nonprofit environmental organization of over 50,000 members, welcomes the invitation to testify on the implementation of the health related requirements of Superfund. These hearings focus on the central issue in regulating hazardous waste--the impact of toxic substances in hazardous waste on human health. Superfund was passed four years ago in response to public concern and scientific understanding that our health was endangered by many toxic and persistent industrial chemicals escaping into the environment from treatment, storage, and disposal sites. In order to prevent significant and possibly irreversible damage to the health of Americans, Congress established in the Superfund a mechanism for the rapid identification and remediation of the hazardous waste sites which most imminently threatened public health and welfare.

Four years ago, our knowledge of the effects of hazardous waste on human health was limited, and our response was,

rightly, based on the public health maxim that an ounce of prevention is worth a pound of cure. There had been no full-scale investigations of the association between chemical exposure and human disease and death. Attempts have been made prior to and independent of Superfund only in a fragmentary way to investigate the state of American health and the effects of toxic substance exposure--such as the SEER program of the National Cancer Institute, which focusses exclusively on cancer, and some of the industry-wide studies of the National Institute of Occupational Safety and Health. The major epidemiologic resources available to the states and the Federal government had not been used to develop an understanding of the associations between toxic substance exposure and human health.

As part of Superfund, Congress authorized the establishment of a new Agency, the Agency for Toxic Substances and Disease Registry (ATSDR) within the Department of Health and Human Services. This new agency was to undertake the health-related activities of Superfund, including:

*site specific health studies of Americans exposed to hazardous waste

*exposure registries of people from these sites, for the purposes of long-term follow-up

*investigations of the relationships between exposure to the toxic substances in hazardous waste and human health (including disease registries).

In addition, ATSDR was to oversee the specific health condition of exposed people, providing medical care and testing of residents of Superfund communities.

In the health-related requirements of Superfund, Congress provided for improving the quality and increasing the quantity of our knowledge of the health effects of toxic substances. The value of health studies, long-term exposure registries, and investigations of associations between chemical exposure and disease is evident. When done well, they can greatly assist public policy and regulation. For instance, the landmark research of the National Center for Health Statistics and CDC on the relationships between incidence of childhood lead poisoning and the use of lead in gasoline demonstrates how such research can guide public policy. The lead investigation established two facts which regulators need to know: first, that exposure to toxic substances can adversely affect health on a significant scale, and second, that reducing that exposure can significantly improve the nation's health.

The establishment and maintenance of exposure registries is essential for detecting changes in health, particularly over the long term. For instance, almost all we know of the toxic effects of dioxin in humans has come from the continuing registries of the residents of Seveso, Italy registries which have been actively maintained for almost eight years. Registries are also critical for facilitating the application

of advances in medical treatment to exposed people. For instance, considerably after their exposure to the insecticide kepone, people in Hopewell, Virginia, were able to be located and called back through an exposure registry for a new treatment which greatly reduced their body burdens of this toxic chemical.

Complete and appropriate implementation of the health-related requirements of Superfund over the past four years could have provided a basis for determining objectives, priorities, and funding required for reauthorization of the law to finish the cleanup process, and it could have informed decisions on the appropriate compensation of persons whose health has been damaged by hazardous waste exposure.

Implementation of the health-related requirements by EPA and HHS could have also helped relieve the anguish and uncertainty of those Americans who have been involuntarily exposed to hazardous wastes. Industrial spokesmen frequently disparage "chemical-phobia"; yet a fearful caution is the only reasonable reaction to the continuing void of information. Making currently available information publicly accessible would also accomplish much by empowering citizens and local authorities to evaluate their own situations. A de-escalation of the confrontational interactions between the public and the EPA may result. Congress intended this need to be met by authorizing among the health-related requirements a project of

data gathering and dissemination of information on the effects of toxic substances.

Another important health-related function in Superfund is the assessment of the nature and extent of environmental damage resulting from the escape of hazardous wastes. Congress provided for this by requiring a reporting mechanism for publishing a comprehensive national list of all areas where contamination by toxic substances has restricted public access and use -- lakes closed for swimming, drinking water wells shut down, streams restricted for fishing, and game whose consumption is prohibited or reduced because of chemical bioaccumulation.

What we shall describe to you in this testimony is an almost complete failure of implementation of all of these functions as a consequence of a strangling of the ATSDR by EPA and OMB. As Congress moves to reauthorize and extend Superfund, we know little more now than we did in 1979; we have little chance of using improved knowledge to formulate policy objectives and guidance. Most importantly, we have lost and will continue to lose people -- our fellow citizens -- forever from the attention of medical surveillance and possible therapeutic intervention before the onset of life-threatening disease.

The Failure in Implementation

In order to understand the Government's failure to implement the health-related provisions of Superfund, it is useful to look briefly at the history of its attempts and at the current state of affairs within ATSDR. The creation of ATSDR was mandated and its responsibilities were spelled out when Superfund was enacted in December, 1980. But two years after enactment, the Government still had not established the Agency or taken any substantial steps to begin to fulfill its responsibilities to investigate the health effects of toxic substances either systematically or at specific sites. In December 1982, the Environmental Defense Fund sued to attempt to remedy this situation. In April 1983, the Government finally established the Agency and the suit was settled. The consent decree (copy attached as Appendix A), which was agreed to by all parties, including the Department of Health and Human Services and EPA, spelled out in some detail the specific steps the Agency was to take to begin to fulfill its responsibilities under Superfund. It also set specific dates for the completion of most of those activities.

Even with this explicit guidance from the court, the Agency's performance to date has been disappointing. The most important activities are only in the preliminary stages, and some of them will be terminated for lack of funds. Moreover, many deadlines spelled out in the consent decree will not be

Chronology of Health-Related Activities Under Superfund

1980	CERCLA becomes law.
December, 1982	EDF sues EPA, HHS for establishment of ATSDR.
April, 1983	ATSDR formally established within CDC.
	EDF, EPA, HHS reach settlement.

met -- deadlines which both EPA and HHS agreed to. As we examine the Agency's particular problems (see Appendix B for detailed review), it is important to keep in mind that the Agency is dependent for funding upon Superfund money, as administered by EPA and OMB. There is no routine mechanism for Congressional hearings and appropriations to supplement or override the decisions of these two agencies.

Exposure Registries

In the area of exposure registries, the Agency has not yet issued the document which would set up guidelines for establishing registries of persons exposed to toxic substances. Even after issuance, it will take a month or more of peer review and public comment, as well as more months of consideration of those comments before the document is issued in final form. Only then does ATSDR intend to start to form registries of exposed persons. No registries have been started to date, although there are some "lists" of persons exposed to dioxin in Missouri.

Waiting for registry guidelines is unnecessary and means that some registries will not be done at all. Registries can only be set up soon after an exposure incident. It is already far too late to register the residents of Love Canal -- all we have now are the "snapshots," all incomplete, some of which are disturbing, of aspects of these peoples' health within a limited time following the surge of concern in that community

in 1976. While guidelines are useful, starting a registry need not await their completion. For example, the Italian government began its Seveso registry immediately after the incident and has been using it productively since.

General Health and Exposure Investigations

The collection of information on serious disease and death (morbidity and mortality) from diseases wholly or partially attributable to exposure to hazardous substances has not started. It awaits the publication of a document specifying uniform methods for the collection of such data on a national basis. This is scheduled for November, 1984 -- a year behind the date specified in the consent decree. More seriously, the collection of such data during fiscal 1985 has essentially been terminated. Of the $2.9 million ATSDR requested from EPA, EPA agreed to provide $2.0 million, but OMB cut the amount to just $250,000. Essentially nothing can be done with this amount of money, and OMB's arbitrary action has in effect terminated this activity, though it is mandated by section 104(i)(1) of Superfund and by the district court's order.

ATSDR has offered the previously existing CDC project on rare sentinel diseases as partial fulfillment of this Superfund obligation. This is only a small part of the issue: toxic substance and hazardous waste exposure may cause an increase in the rate of common as well as rare diseases. Moreover, any registry of serious diseases must include information on

residence by geographic location to establish possible relationships between exposure to toxic substances and hazardous waste and subsequent health effects.

Site-specific Health Studies

The collection of health data from people exposed to toxic substances at specific sites where toxic substances have been released, is proceeding slowly and incompletely.

To date, requests for scientific support and emergency response consultations from outside the Agency have monopolized ATSDR's limited resources and derailed its agenda from the course set by Congress. From April 1st to December 31st, 1983, ATSDR responded to over 600 requests for health consultations, site visits, report reviews, or meeting participation. Understandably, the Agency had little time to undertake comprehensive health studies. Only three site-specific epidemiologic studies have been completed since the inception of the ATSDR. In all of these, CDC had significant involvement long before Superfund. Preliminary results from these studies suggest more refined research is necessary to reach useful and definitive conclusions. Eleven more such studies are underway, but several of these were also initiated before Superfund was passed.

The ATSDR's activities related to human health studies should be part of an overall framework to determine relationships between exposure to toxic substances and

illnesses, encompassing both public health emergenices and non-emergencies. The selection of sites or events should be based on their suitability as the focus for scientific studies and their potential contribution to understanding the relationship between toxic exposures and disease. The value of such studies is greater than the immediate response to emergencies or as background for scoping specific clean-ups. Achieving the goals of Superfund will require a comprehensive framework for health studies using state-of-the-art methodologies which will generate accurate and comparable insights. The identification, not to mention resolution, of the health problems associated with toxic exposures cannot be achieved without conducting new and innovative health screening and surveying programs.

Information on Effects of Toxic Substances

An inventory of literature, research, and studies on the health effects of toxic substances -- the Toxicology Data Base -- was originally based on information in the National Library of Medicine. Efforts were underway to update, enhance, and expand the data base, but lack of funds halted much of this progress. Funds for including information on additional substances were cut by EPA from a requested $1.4 million to just $600,000, and then to $550,000 by OMB. Moreover, after investing over $5 million in the data base, another $100,000 was needed for software modification so that the library would

be effectively available to public health officers around the country, and not just to those with extensive training on the current software. EPA and OMB have mindlessly deleted this small amount from the budget, thus rendering valueless the previous investment of $5 million.

Finally, $4.5 million was requested for the identification and testing of chemicals found at Superfund sites for which inadequate toxicological data exists. Though recognized as essential by EPA, all of this money was deleted by OMB.

Listing of Closed and Restricted Areas

ATSDR has yet to list areas closed to the public or otherwise restricted due to contamination by toxic substances. The National Governors Association has bid on a proposal for a pilot study of only two states. At this pace, the deadline of November, 1984 in the consent decree for a complete listing of restricted sites in all states cannot possibly be met.

Medical Care and Testing

The intent of Congress was to provide for emergency medical care and clinical testing through the Public Health Service hospitals. Unfortunately, this Administration has closed these hospitals. In certain circumstances, ATSDR has followed the standard practice of the U.S. Public Health Service in supplying care and testing, as in Missouri and East Helena. However, the Agency has no resources to guarantee such response on a more reliable basis.

Financial Instability of ATSDR

As the foregoing examination of ATSDR's activities reveals, lack of funding has been a major impediment to the achievement of its ATSDR's statutorily mandated objectives. A brief review of the history of its funding reveals sharp changes in basic funding levels, largely wrought by OMB. A summary of that history is shown in Table 1.

Before ATSDR's establishment in 1983, CDC was providing health-related consultations and other Superfund-related services under an interagency agreement (IAG) with EPA. Two such agreements covered parts of 1982 and 1983. As Table 1 shows, funds provided for health studies and the Toxicology Data Bases rose substantially from 1982 to 1983, and overall funding for HHS Superfund activities rose from $3.3 million in 1982 to $11.8 million in 1983.

After ATSDR's establishment in 1983, it assumed most of HHS's Superfund activities and OMB intervened in the allocation of funds from Sueprfund. Table 1 shows that funds for health studies and overall HHS Superfund activities in fiscal 1984 were cut to one tenth of the level for the previous year, and funds for the toxicology data base were cut to zero. These dramatic cuts make it extremely unlikely that ATSDR will achieve its mandate any time in the near future.

TABLE 1.

Funding Allocations by EPA and OMB
for Health-Related Activities under CERCLA:
CDC and Agency for Toxic Substances and Disease Registry

Activities	1982*		1983**		1984 OMB Allocation to ATSDR		1985 Request by ATSDR	
	Funds ($000)	Personnel (FTE)	($000)	(FTE)	($000)	(FTE)	($000)	(FTE)
Scientific Support	1,189	18	1,423	15	1,125	12	2,867	34
Emergency Response	438	6	438	6	480	6	661	8
Health Studies	1,136	15	2,747	11	300	3	7,959	39
Worker Health & Safety (NIOSH)	349	5	1,876	4	-0-	-0-	840	10
Toxicology Data Bases	232	2	5,386	3	-0-	-0-	6,075	10
Total	3,344	34	11,870	39	1,905	21	18,402	101

* FY82 funding was made available to CDC six months into the fiscal year through an Interagency Agreement with EPA.

** 1983 funding came from an Interagency Agreement with EPA which covered the period from April 1, 1983 through March 31, 1984 -- an overlap between FY 83 and FY 84. The total amount allocated under the two IAGs reflects the amount earmarked by Congress for HHHS activities under Superfund for FY 82 and FY83. Site specific funding of $496,000 for responding to dioxin sites in the State of Missouri is not included in this amount.

Fiscal 1985 continues to show the heavy hand of OMB on ATSDR's budget. Table 2 shows ATSDR's budget request through HHS for fiscal 1985 (including other HHS Superfund activities), EPA's allowances from Superfund, and OMB's final allowances from Superfund (Table 1 shows only HHS's request, not the actual budget plan by ATSDR or CDC). While funds for Scientific Support (of EPA's functions) and Emergency Response (again in support of EPA) were untouched, the funds for Health Surveys and Health Investigation Guidelines and for Toxicology Data Bases (the health-related activities that have concerned us in this testimony) have been eviscerated. Funds for health studies have again been cut substantially in two areas, and the Sentinel Diseases Project (a collection of general disease investigations) has been cut so drastically (from $2.9 million to $250,000) that it has been effectively terminated. Moreover, less than one tenth of the funds needed for the Toxicology Data Bases remain, and funds for public accessibility to the data bases (Software Modification) have been cancelled entirely.

This arbitrary and erratic pattern of funding puts ATSDR's long range projects particularly in serious jeopardy. EPA's modest part in these ups and downs may be explaind by its bias toward funding those consultations and other health-related activities which help EPA directly in performing its response and remediation activities. OMB's reasons for its evisceration

TABLE 2.
ATSDR FY1985 BUDGET:
REQUESTS AND OMB MARKUP

(Dollars in thousands)

DECISION UNIT	HHS Request	EPA Allowance	OMB Markup
1. Scientific Support			
a. Health Assessments/ Test Reviews	$ 2,149	$ 2,149	$ 2,149
b. Training (State and local)	264	25	25
c. PHS Coordination	454	454	454
Subtotal	$ 2,867	$ 2,628	$ 2,628
2. Emergency Response			
a. Field Guidance and Laboratory Support	$ 661	$ 661	$ 661
Subtotal	$ 661	$ 661	$ 661
3. Health Surveys and Health Investigation Guidelines			
a. Guidelines for Laboratory Testing and Epidemiologic Studies	$ 1,042	$ 1,042	$ 1,042
b. Development of Site Specific Protocols	1,335	1,335	835
c. Pilot Studies	240	240	240
d. Birth Defect Registry	2,424	2,424	2,424
e. Sentinel Disease Project	2,918	2,000	250
Subtotal	$ 7,959	$ 7,041	$ 4,791
4. Toxicology Data Bases (NLM and NTP)			
a. Additional Substance Entries	$ 1,425	$ 600	$ 550
b. Support	50	25	25
c. Software Modification	100	0	0
d. Short-term Toxicology Testing of Chemicals	4,500	4,500	0
Subtotal	$ 6,075	$ 5,125	$ 575
Total	$17,562	$15,455	$8,655

of ATSDR's budget are not obvious. Saving money cannot be a substantial motivation. Compared to a total Superfund of over $1 billion, these requests by ATSDR and HHS of $10 to $20 million for all of the health-related activities are very small. Moreover, the money already exists in Superfund. Congress has determined that part of it should be spent to provide health-related services and to increase fundamental understanding of the effects of toxic substances on health.

Personnel Limitations

Unlike other components of the Centers for Disease Control, ATSDR does not have its own buildings, laboratories, or other facilities. Its staff is still very small (47 full-time equivalent positions). Moreover, important members of its staff hold primary positions in other parts of CDC, as shown below:

	Position in ATSDR	In CDC
Dr. Mason	Administrator	Director
Dr. Watson	Deputy Administrator	Deputy Director
Dr. Houk	Assistant Admin.	Director, Center for Environmental Health (CEH)
Mr. Jackson	Associate Admin.	Deputy Director, CEH
Mr. Vandermeer	Executive Officer	Associate Dir., CEH

These officials are not assigned to Superfund-related positions in ATSDR for funding purposes, but maintain affiliation with

other parts of CDC. Of the 47 FTE positions currently assigned to ATSDR, there are only 8 persons fully assigned to this agency; 6 persons are assigned to ATSDR but retain their permanent affiliations with NIOSH (part of CDC), and 32 persons within the Center for Environmental Health are currently assigned to ATSDR activities. The CEH also devotes more personnel, on an as needed basis, but this is clearly a situation which is greatly stretching this organization's resources without adequately meeting the needs of ATSDR.

Recommendations

The ATSDR now exists, although as our testimony demonstrates its strength is limited, its resources negligible, and its future uncertain. To ensure that the mandate of Congress is more completely fulfilled under the next phase of Superfund, EDF recommends:

- o ATSDR must be adequately staffed and funded with continuing Congressional oversight;
- o ATSDR must have independence from the priorities of EPA which are focussed on cost-effective remediation and fund-balancing, and from EPA's needs for consultation in response and remediation;

With these resources, EDF recommends:

- o ATSDR must apply sensitive, state-of-the-art methods for health investigations;
- o ATSDR must establish and maintain long term active registries of exposed persons;

- o ATSDR must undertake large-scale investigations on the association of hazardous waste exposure and human disease, including registries of individuals with serious and sentinel diseases;
- o ATSDR must lead in the training of scientists and clinicians to detect and understand the subtle as well as the more obvious manifestations of toxic diseases; and
- o ATSDR must continue the task of developing and providing accessible information on toxic substances.

None of these functions has been accomplished, and without considerable changes in personnel, funding and legislative language, it is unlikely that they will be accomplished.

Personnel

ATSDR requires appropriate staff for its activities. For a reasonable level of administrative organization and day-to-day response capability and to interface with EPA regional offices, CDC had originally requested authorization for 100 positions; it currently has 47. More than this, ATSDR needs a staff committed full-time to the goals and obligations of the agency. ATSDR cannot continue to depend upon the "kindness of its friends," or CDC. This kindness is eroding quickly due to the severe budget cuts which all the Centers for Disease Control have suffered under this Administration. The current

arrangement of dual appointments between the Center for Environmental Health and ATSDR is basically robbing Peter to pay Paul, while Peter is being mugged on his way to work.

Funding

In order to conduct its health-related activities, ATSDR requires appropriate funding, either as a specific appropriation through access to funds from the Superfund. To date, this access has been drastically reduced by EPA and cut further by OMB. Even now, EPA uses its fiscal control to misdirect the fundamental purpose of such health studies to merely support EPA's efforts at determining site-specific remedial actions.

EDF recommends a baseline annual funding for the activities of the ATSDR as follows:

* Site-specific Health Studies - $22.5 million

A reasonably comprehensive and scientifically valid health study of a community living near a Superfund hazardous waste site (average size 200 people) costs approximately between $750,000 and $2 million.[1/] Total funding depends upon the

1/ Data based on scoping report by John Hopkins University School of Hygiene and Public Health for a study of the Hollywood Dump in Memphis, TN (1981); and on estimated costs to CDC of studies of smelter communities in Idaho and Montana.

number of such site-specific health studies undertaken; the costs would be approximately $1.5 million for each study. EDF recommends that it is reasonable to expect the ATSDR to have at least 15 such site-specific health studies ongoing at any time.

* Registries - $4 million

In order to establish and maintain active registries of exposed persons, ATSDR requires not only adequate funding but the reasonable assurance of stable funding. Registries are meaningless unless they are supported by the ability to call back people at regular intervals for reevaluation and to retriev e medical records, such as birth data and death certificates, in a timely and reliable fashion.

The CDC Michigan PBB Registry provides the longest history and best documentation of the real costs of maintaining a registry of people exposed to toxic chemicals. This registry was set up in 1975 by DHHS. It has cost approximately $500,000 per year to maintain and to provide minimal followup activity (essentially a yearly querying of registrants as to their health status). This works out to approximately $100/person/year. However, this population is significantly less mobile than is characteristic of the American population. Costs of follow-up would be considerably higher for a more typically mobile population.

EDF recommends that it is reasonable to expect ATSDR to establish a long-term exposure registry for each site which is identified for priority action by EPA, or mandated by Congress for clean-up. On this basis, approximately 100-200 sites may be remediated per year. If there are an average of 200 persons who may reasonably be expected to be exposed at each of these sites, then registries of 20,000 to 40,000 persons would be established, at a cost of $2-4 million per year. This is a minimal effort at health tracking. In contrast, the VA Agent Orange Registry, a more active registry has cost about $40 million a year.

* Investigations and disease registries: $30 million

In addition, ATSDR is to undertake fundamental studies on the association of toxic chemical exposure with human disease. The most recent investigation of this scale is the National Health and Nutrition Examination Survey (NHANES), which was reported out last year. This investigation, conducted by the US National Center for Health Statistics, cost approximately $30 million. EDF recommends that ATSDR undertake one such national survey on the topic of hazardous waste exposure, at a cost of about $30 million.

* Other Functions

Implementing the other activities of ATSDR the information function and the restricted sites reporting function also requires personnel and funding commitments. (The second

function has not been initiated and so it is difficult to recommend resources.) As this testimony reveals, the history of funding for the information system has been highly erratic. While the information function has benefited greatly by operating within the National Library of Medicine, full implementation (including acccessibility to the general public) requires further support. Also, such databases are useless if not continually updated and maintained. EDF recommends stable funding at a level of $1-2 million per year until such time as the system is well established and tested. Then minimal appropriations will be required primarily for updating purposes. Some of these funds may be recaptured by subscription and user fees, as is the case with NLM's other databases such as Medline and Toxline.

In addition, there is a lack of toxicologic data on some toxic substances which are frequently detected in hazardous waste. These substances and their interactions need to be tested on a high priority basis, using the resources of the National Toxicology Plan. EDF recommends allocation of the amount requested by CDC and approved by EPA for this function, $4.5 million.

Statutory Revision

Finally, EDF believes some revisions to the legislative language of Superfund would be useful. Our experience with the Government's attempts to implement Superfund's health-related

requirements over the last three and one half years shows that ATSDR's efforts have been not been focused on the proper areas and types of activities, and that EPA and especially OMB have felt free to ignore the mandate of the statute in deleting needed funds. We believe that both these problems could be alleviated in part if the language of Superfund section 104(i) were clarified to specify ATSDR's responsibilities in more detail using language similar to that which we have used to describe them in this testimony. EDF would be pleased to supply specific legislative language accomplishing this goal.

APPENDIX A.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FILED
MAY 27 1983
JAMES F. DAVEY, Clerk

ENVIRONMENTAL DEFENSE FUND, INC.,
Plaintiff,
v.
MARGARET M. HECKLER, et al.,
Defendants.

Civil Action No. 82-3514

CONSENT DECREE

WHEREAS, the Environmental Defense Fund (EDF) filed the complaint in this action on December 10, 1982, against the Secretary of the Department of Health and Human Services (HHS), the Department of HHS, the Administrator of the Environmental Protection Agency (EPA), and the EPA, seeking declaratory and injunctive relief relating to the implementation of section 104(i) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9604(i) (Supp. V 1981); and

WHEREAS, defendants filed their answer to EDF's complaint on February 8, 1983, denying many allegations of the complaint and asserting various defenses; and

WHEREAS, EDF and defendants are desirous of reaching a mutually satisfactory settlement of this action and to that end have been involved in good-faith negotiations since the commencement of this action; and

WHEREAS, it is in the public interest, the interests of the parties, and the interest of judicial economy for this action to be resolved without protracted litigation; and

WHEREAS, neither party makes any admissions concerning the merits of EDF's complaint or of defendants' defenses by entering into this Consent Decree;

NOW, THEREFORE, it is hereby ADJUDGED AND DECREED that:

1. The Court has jurisdiction over the parties and the subject-matter of the complaint.

2. The Court determines that the terms of this Consent Decree are reasonable and adequately resolve the issues raised by EDF in this action.

3. The Court finds that the Agency for Toxic Substances and Disease Registry (ATSDR) has been established within the Public Health Service, 48 Fed. Reg. 17,651-52 (April 25, 1983), and that the Director of the Centers for Disease Control has been designated as the Administrator of the ATSDR.

4. The Administrator of the Agency for Toxic Substances and Disease Registry (ATSDR) shall:

(1) (a) in cooperation with the States, and with other federal and local officials, establish and maintain a registry or registries of all persons exposed to toxic substances as a result of environmental exposure, whenever their inclusion in such registries would be scientifically appropriate or valuable for long-term follow-up or specific scientific studies, and (b) conduct peer review, to be completed within one (1) year, on the

methods to be used in establishing and maintaining such registries;

(2) in cooperation with the States, and with other federal and local officials, collect, maintain, and analyze information relating to serious diseases and mortality and information relating to human exposure to toxic substances;

(3) recommend within six (6) months uniform methods for the collection of the information described in subparagraph (2) on a national basis, provided that the ATSDR may coordinate its activities with ongoing programs of the National Center for Health Statistics or other federal agencies, and that its recommendations may consist of endorsing methods or guidelines developed by the National Center for Health Statistics or other federal agencies;

(4) establish within eighteen (18) months and maintain a comprehensive and publicly accessible inventory of literature, research, and studies on the health effects of toxic substances;

(5) in cooperation with the States, and other agencies of the Federal Government, establish within eighteen (18) months and maintain a complete listing of areas closed to the public or otherwise restricted in use because of toxic substances contamination, including, but not limited to, areas where such contamination has restricted fishing or recreation or has affected drinking water wells;

(6) in cases of public health emergencies caused or believed to be caused by exposure to toxic substances,

assist, consult, and coordinate with private or public health care providers in the provision of medical care and testing of exposed individuals, including the collection and laboratory analysis of specimens as may be indicated by the specific exposure incident; and

(7) conduct periodic survey and screening programs to determine relationships between exposure to toxic substances and illness.

Except as expressly provided herein, nothing in this paragraph shall be construed to limit or modify the discretion accorded to the Administrator by CERCLA and by general principles of administrative law.

5. Upon reasonable request, the Administrator shall furnish EDF with information from the ATSDR, including (1) reasonable access to its officials or staff and (2) written answers to written questions, to enable EDF to determine what progress has been made in implementing this Consent Decree. Nothing in this paragraph shall be construed to limit EDF's ability to obtain information under the Freedom of Information Act.

6. Defendants shall pay to plaintiff, in settlement of this case, the sum of $9,252, which reflects filing fees, costs, attorney's fees, and other expenses incurred in connection with this litigation up through the date of this Consent Decree.

7. Upon approval of this Consent Decree, EDF's complaint shall be, and hereby is, dismissed. However, either EDF or defendants may petition this Court at any time by motion for enforcement

of this Consent Decree or for resolution of any dispute over its implementation.

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Approved: Norma Holloway Johnson
NORMA HOLLOWAY JOHNSON
United States District Judge

Date: May 27, 1983

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

FILED

MAY 27 1983

JAMES F. DAVEY, Clerk

ENVIRONMENTAL DEFENSE FUND, INC.,

Plaintiff,

v.

MARGARET M. HECKLER, et al.,

Defendants.

Civil Action No. 82-3514

ORDER

This 27th day of May, 1983, upon consideration of the proposed Consent Decree presented to the Court, it is hereby

ORDERED that Plaintiff-Intervenors Chemical Manufacturers Association (CMA) and American Petroleum Institute (API), having approved the foregoing Consent Decree, shall have the same right to obtain information that is accorded to Plaintiff Environmental Defense Fund (EDF) under paragraph 5 of the Consent Decree, and shall have the same right to petition the Court that is accorded to EDF and to the Defendants under paragraph 7 of the Consent Decree, and that CMA's Complaint and API's Complaint shall be, and hereby are, DISMISSED.

Norma Holloway Johnson

NORMA HOLLOWAY JOHNSON
United States District Judge

Appendix B

Detailed Review of ATSDR Activities
April, 1983 - December, 1983

I. Scientific Support Consultations

1. Provide needed site-specific health-related scientific support and advice to EPA headquarters and regions.

2. Recommend and review environmental test results for indication of human health hazard on sites which have undergone site investigation by EPA.

   Include site-specific health consultations and assessments, plan and report reviews, site visits, and meeting participation.

3rd QTR FY83: 243 consultations at 158 sites.

4th QTR FY83: 286 consultations at 157 sites.

1st QTR FY84: 171 consultations at 111 sites.

II. Emergency Responses

1. Provide health-related field guidance and laboratory support at emergency sites.

   Include site-specific health consultations and assessments, plan and report reviews, site visits, and meeting participation.

3rd QTR FY83: 127 consultations at 66 sites.

4th QTR FY83: 167 consultations at 73 sites.

1st QTR FY84: 122 consultations at 58 sites.

III. Site Specific Studies

1. Epidemiologic studies and pilot investigations on limited target populations at Superfund sites in cooperation with States.

34-870 O - 84 - 53

Study	STATUS AS OF 3rd QTR FY83	4th QTR FY83	1ST QTR FY84
1. Missouri-Dioxon	initial development	underway	completed, pilot study
2. Triana, AL -- DDT	-	-	completed, possibly continuing
3. Old Forge, PA	-	-	completed, possibly continuing
4. Woburn, MA	-	-	completed, possibly continuing
5. Love Canal, NY	-	-	completed, possibly continuing
6. Ashtabula, Ohio -- PCBs	-	-	completed, pilot study
7. Bloomington, IN -- PCBs	-	-	completed, pilot study
8. Perdido, AL -- Benzene	-	-	completed, pilot study
9. East Helena, MT -- Lead	initial development	underway	preliminary results
10. Kellogg, ID -- Lead	initial development	underway	preliminary results
11. Memphis, TN	-	-	underway
12. Tacoma, WA -- Arsenic	-	-	underway
13. Oak Ridge, TN -- Mercury	-	-	underway
14. New Bedford, MA -- PCB	-	-	underway
15. Clinton County, PA-- beta-naphthylamine and others	-	-	underway

IV. Registries

No efforts made from 3rd QTR FY83 through 1st QTR FY84, except for "listing" of exposed citizens in Missouri Dioxin Study.

V. Investigations

Include general birth defects surveillance and biomonitoring.

Investigation	3RD QTR FY83	4TH QTR FY83	1ST QTR FY84
1. Tennessee* -- low birth weights	initial development	initial development	initial development
2. Georgia* --low birth weights	initial development	initial development	initial development
3. Metro. Atlanta Area, GA -- numerous health defects	initial development	initial development	-
4. Florida -- birth defects in Southern Florida -- EDB reproductive effects	initial development	initial development	initial development
5. Jefferson, OH -- PCBs	-	-	completed, pilot study
6. Fairmont, WV -- PCBs	-	-	completed, pilot study
7. Norwood, MA -- PCBs	-	-	completed, pilot study

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* epidemiologic study proposed.

VI. Toxicology Data Bases

1. Expand and enhance data bases for chemicals generally found in designated Superfund sites or encountered in toxic emergency situations.

Number of Records Completed	3RD QTR FY81	4TH QTR FY81	1ST QTR FY82
New Substances	0	230	350
Updates	0	23	0

ENVIRONMENTAL DEFENSE FUND

COMMENTS

of the

ENVIRONMENTAL DEFENSE FUND

on the

DRAFT BILL TO REAUTHORIZE "SUPERFUND"

Submitted to the

Committee on Environment and Public Works

United States Senate

July 23, 1984

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COMMENTS OF THE ENVIRONMENTAL DEFENSE FUND
ON THE DRAFT BILL TO REAUTHORIZE "SUPERFUND"

The Environmental Defense Fund is a national, not-for-profit environmental organization with a nationwide membership of approximately 50,000. The goal of EDF's toxic chemicals program is to minimize or prevent exposure of people and the environment to toxic chemicals. To this end, we have been actively involved in the implementation of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("Superfund"). EDF appreciates the opportunity to comment on the draft bill to reauthorize Superfund.

The environmental community has spent considerable time and resources in the last several years working to improve Superfund implementation and thereby ensure rapid and effective clean-up of dump sites. EDF sued EPA to force promulgation of the National Contingency Plan and, when the NCP was issued, sued again to remedy its inadequacies and its failure to meet the requirements of the law. EDF also sued the Department of Health and Human Services to set up the Agency for Toxic Substances and Disease Registry (ATSDR) and has been actively involved in overseeing ATSDR's implementation of the consent decree settling that lawsuit.

Our comments address four issues of general importance to the implementation of the Superfund program and then turn to the activities of the Agency for Toxic Substances and Disease Registry and the section of the draft bill on toxicological data.

Mandatory Clean-up Schedule

Perhaps the most disappointing aspect of EPA's Superfund program has been its snail's pace. The clean-up problem is immense. The National Priority List now stands at 546 sites which EPA has determined require priority treatment, and EPA expects that list to grow to 1400 to 2000 sites. EPA has identified over 17,000 hazardous waste sites, and projects that that figure may reach 22,000. The Association of State and Territorial Solid Waste Management Officials (ASTSWMO) estimates that more than 7,000 of these sites threaten public health and will eventually require cleanup.

By comparison, the pace of EPA's clean-up program is insignificant. Although Superfund was enacted three and one half years ago, only six sites have been cleaned up so far, and only 120 sites are even scheduled to have remedial actions underway by the end of September, 1984. At this rate, clean-up of even the current priority sites will take over a decade.

But the problem clearly cannot wait this long. Hazardous waste sites are now contaminating drinking water, surface water, air, and soil, causing death and serious disease. EPA estimates that 16 million people are potentially exposed to contaminants from the 881 sites it has evaluated under the Hazard Ranking System. Of the ten chemicals reported most frequently at these sites, seven are known carcinogens, five cause genetic mutations, and seven cause birth defects. Groundwater is a primary route of human exposure through drinking water. An unreleased study reported contaminated underground drinking water supplies in 29 percent of the 954 cities investigated, all with populations of more than 10,000. Moreover, sites that are not cleaned up continue to get worse. Chemicals continue to leach from the site and spread into ever larger underground plumes, threatening more people and raising the ultimate cost of clean-up.

EPA's pace in planning and initiating clean-ups is hardly adequate to meet these problems in a timely fashion. Congressional action is needed to assure that EPA adopts and meets an explicit clean-up schedule which is far more rapid than its present pace and can be monitored. EDF's experience has shown that statutory schedules are a useful tool for obtaining timely Agency action. EDF sued EPA to require it to issue regulations under the schedule of the Resource Conservation and Recovery Act (RCRA) and has acquired extensive experience in the enforcement of Congressional deadlines for hazardous waste. While Congressionally mandated schedules are no panacea, they are far better than no mechanism at all. With this instrument, the courts have set dates for compliance with RCRA provisions which have generated substantial pressures within the Agency to accelerate a process that otherwise would have dragged on substantially longer. In the absence of any better mechanism, a Congressionally mandated schedule is clearly needed.

A complete schedule should incorporate a number of requirements. We recommend the following:

(1) Preliminary Assessments. By January 1, 1987 EPA should complete a preliminary assessment for each site on the Emergency and Remedial Response Information System (ERRIS) list.

(2) NPL Update. The most serious of the ERRIS sites should be added to the National Priority List. EPA should list 1600 such sites by January 1, 1988.

(3) RIFSs. Remedial investigations and feasibility studies of sites now on the NPL should be completed within 18 to 24 months. Thereafter, EPA should initiate RIFSs at new NPL sites at a rate of at least 200 per year.

(4) Remedial Actions. EPA should commence remedial actions on at least 150 NPL sites per year, beginning by October 1, 1986. EPA should also take all steps necessary to assure that

remedial action is completed at all facilities currently listed on the NPL within 5 years. For those facilities at which remedial action is not completed within 5 years, EPA should publish an explanation of why the remedial action was not completed within that time.

Clean-up Standards

We strongly support those provisions providing a preference for remedial actions which rely on treatment to reduce the volume, toxicity, or mobility of hazardous waste as a principal element of the remedial action. We also support the provision that offsite transport of hazardous materials for disposal without such treatment is to be the least favored alternative where practical treatment technologies are available.

Treatment of hazardous materials would be a significant improvement over present remedial practices, which focus on containment or transport to other land disposal facilities. Many presently operating landfills leak, and seem likely to become candidate Superfund sites. Cleaning up one Superfund site by contributing another is clearly a poor practice and should be improved.

The draft bill also requires clean-up to background levels of contaminants, but provides that the President may modify that requirement so long as human health and the environment is protected. We support stringent clean-up standards but believe that the standards and criteria under the Solid Waste Disposal Act (RCRA), the Toxic Substances Control Act, the Safe Drinking Water Act, the Clean Water Act, and the Clean Air Act would be preferable as standards for clean-up of Superfund sites. Background levels of contaminants have proved difficult to determine, as shown in EPA's groundwater monitoring program under RCRA. At a Superfund site, the problem may be further complicated by the presence of the other sites in the area. In

addition, a background standard is not health related; the more stringent background standard would more often lead to modification of the standard and thus to no quantitative standard at all.

Equally important, the draft bill provides no criteria for determing under what conditions the President may modify the statutory standard, leading to the possibility that the background clean-up standard or other standards might routinely be ignored. The standards under the Acts mentioned above should be used unless the alternative chosen will provide protection of human health and the environment substantially equivalent to that provided by those standards, or compliance with those standards would consume a disproportionate share of Superfund resources so as to defer or prevent remedial actions at other Superfund sites which pose a significantly greater threat to human health or the environment.

Repeal of the Post-closure Liability Fund

Section 107(k) of Superfund provides for a fund to assume all liability for a closed, permitted hazardous waste disposal facility under certain circumstances. But the fund is no substitute for long-term liability on the part of owners and operators for problems caused by their disposal facilities. Extinction of this liability works against the objectives of RCRA and should be repealed.

Long-term liability is the most important incentive for responsible management by facility owners and operators. No combination of regulations, inspection, and enforcement can substitute for knowing that one will be called upon to remedy future problems as a mechanism for ensuring the care, caution, foresight, and responsibility needed in the day-to-day operation of a facility disposing of hazardous wastes. Without liability, or individualized fund contributions which vary

sensitively with the design and operation of each facility, the worst operated landfills will also be the cheapest and will tend to drive other operators out of business or into marginal practices.

Long-term liability is also fair. The generators and disposers of hazardous waste are the ones who have created the problem in the first place, along with all the uncertainty it entails, and they are in the best position to ensure that the waste is properly managed. It is therefore fair that they should retain liability for costs that the waste may ultimately impose on others.

The conditions imposed before liability can be transferred provide only illusory protections. Regulations affecting closure and post-closure performance must be complied with. However, the present regulations provide no guarantee that the facility will be free of problems after closure. In addition, it would be difficult to verify that all regulations had actually been complied with over the entire life of the facility. Five years of monitoring after closure is also required and must demonstrate that there is no substantial likelihood that any migration of hazardous substances or other risks to the public will occur. However, deterioration of facilities and the movement of leaked materials may be a slow process, and EPA regulations thus provide for 30 years of post-closure monitoring. Moreover, current monitoring requirements may or may not be sufficient to detect migration of hazardous substances. Five years of monitoring is not sufficient to predict whether a facility may require clean-up in the future.

In addition, it is impossible to estimate how large the fund must be to cover all the costs it may ultimately have to bear. This problem is exacerbated by the fact that landfilling and thus fees for the fund will, hopefully, decline as alternatives are implemented, but the burden on the fund will rise

over time as leaking landfills are gradually discovered. Thus there will be no opportunity to correct later for any current underestimates in the necessary size of the fund. Ongoing discoveries of leakage at operating landfills and the magnitude and cost of Superfund clean-ups suggest that a much larger fund will be needed. Industries using land disposal thus will not be paying the true cost of their practices and the transfer of liability thus subsidizes the worst possible form of waste management -- land disposal -- which should be used only as a last resort.

Too small a fund is also grossly unfair to those injured. Why should a company with the resources of Dow or Monsanto be let off the hook if those injured by its wastes are left uncompensated? Even if the fund is large enough, will the Administration be as impartial as a court in judging and awarding damages when it has the conflicting interest of preserving the fund for unknown future contingencies?

For all these reasons, the post-closure liability fund should be repealed.

The National Contingency Plan as a Regulation

The draft bill provides that the National Contingency Plan should not be considered as a rule or regulation. Laws specifically applicable to rules and regulations, such as Administrative Procedure Act requirements for notice and comment, thus would not apply. The provision casts some doubt on what standards would apply to EPA's actions amending, implementing, or deviating from the NCP and whether such actions would be reviewable in court. Finally, while the provision might free the NCP from Executive Orders generally applicable to rulemakings, it would not appear to prohibit the President from issuing identical or similar orders applicable to the NCP. While the overall effect of this provision is unclear, we believe it is unwise and should be deleted.

TOXICOLOGICAL DATA AND HEALTH EFFECTS OF TOXIC SUBSTANCES

The problem of responding effectively to the dangers of abandoned hazardous waste sites is greatly complicated by the lack of information about the health effects of toxic substances. When Superfund was originally passed, Congress recognized that more information was required. It created the Agency for Toxic Substances and Disease Registry (ATSDR) and charged it with making existing information more available and gathering new information with the ultimate goal of determining relationships between exposure to toxic substances and disease. Unfortunately, the Government did not even establish ATSDR for two years, and EDF sued to force it to do so. The consent decree settling that suit established goals and timetables for beginning ATSDR's work, but it could not mandate the range and depth of work that the Agency needs to do to assure that the goals Congress set for it are achieved. Further action by the Congress is needed now for that purpose.

We think the Agency's problems fall into three categories -- inadequate staffing, inadequate funding, and the confinement of its limited activities too much to those that would be of immediate assistance to EPA in planning remedial actions at particular sites. These problems are discussed in some detail in the May 24, 1984 testimony of Ellen Silbergeld, Ph.D., Chair of EDF's Toxic Chemicals Program, before the Committee, and need not be repeated here. Our purpose here is to suggest solutions.

The provision in the draft bill for 100 full time equivalents is crucial to alleviating the Agency's staffing problems. Its funding problems can be alleviated in part through a larger total budget. But assuring that money is spent on the appropriate projects and focusing the Agency's

activities more clearly on those related to toxic substances and disease will, we believe, require amendment of its "organic statute," CERCLA section 104(i). The Agency's mandate needs to be strengthened, both with more explicit and detailed descriptions of the kinds of activities that are needed, and with action-forcing triggers that will require the Agency to take action in appropriate cases. We lay out below the specific activities we think are necessary to the achievement of the Agency's goals.

Registries of persons exposed to toxic chemicals.

The Agency has failed to set up any registry at any site, of persons exposed to toxic substances, as required in section 104(i)(1) of the present Act. Under the conditions of low-level exposures which usually occur at sites, long-term follow-up of exposed persons is necessary to determine the full range and severity of health effects. Registries of exposed persons are essential for the collection of this data. Much of what is known about the human health effects of dioxin, for example, has come from the registry of those potentially exposed by the chemical explosion in Seveso, Italy. Registries also enable the application of new developments in medical care to prevent or treat disease in exposed persons long after they have been identified. For example, because they were registered, those exposed to the insecticide kepone in Hopewell, Virginia could be recalled for a treatment developed long after their exposure.

Establishment of a registry is not expensive. Only names, addresses, social security numbers, and dates of birth of potentially exposed persons are required initially. This should cost around $100 per person by ATSDR's own estimate, and the State of New York is planning extensive residential exposure registries for only $50 per person. A registry at a

site will probably contain on average only about 100 people. Thus, establishing a registry at the average site will cost between $5,000 and $10,000. Compared to the cost of remediation, or even to the cost of a remedial investigation and feasibiity study, the total cost of establishing a registry at a site is trivial.

It is crucial that registries be set up immediately upon the discovery of exposure. People often move away from a site once they learn of their potential exposure. Thus they become lost forever to further data collection, study, and treatment unless they are immediately registered. This means that registries typically have to be started before it is known whether they will be useful over the long term and before protocols for site-specific data collection have been fully completed. Inevitably, some registries will later be found not to be worthwhile or infeasible for study and will be abandoned. Experience teaches, however, that many registries are likely to prove extremely valuable in treating exposed persons and to the Agency's long-term goal of investigating the link between exposure to toxic substances and disease. The fact that some registries will not be used further is a small and eminently reasonable price to pay to assure that other truly invaluable registries are started promptly, while it is still possible to start them at all.

At a minimum, a registry of exposed persons should be established for each site on the National Priority List. The hazard ranking system, on which the list is based, relies heavily on estimates of risk of exposure and thus is an appropriate way of selecting sites at which registries should be established. One year should suffice to establish registries for current NPL sites, and registries can be established for other sites added to the NPL within six months of their addition.

After a registry is established, the Administrator will

have time to determine whether and to what extent it is scientifically appropriate or valuable for long-term follow-up or specific scientific studies to maintain that registry and to gather additional information. Unless the Administrator determines that a registry is not scientifically appropriate or valuable, a registry should be maintained at least once every five years (and preferably at shorter intervals) by gathering such information as change of address, birth of children, employment, health status, and, if relevant, cause of death. Registries can be periodically refined and re-evaluated as further information becomes available and as national experience with them increases. What is most important is that they be started promptly at each NPL site.

Health consultations, assessments, studies, and investigations

ATSDR should provide a graduated range of services aimed at gathering and disseminating information on health effects from toxic chemicals at particular sites or in particular circumstances. These services should include:

Health Consultations: brief consultations to quickly provide critical information;

Health Assessments: more extensive assessments that review available data and collect limited clinical information over several months;

Health Studies: carefully designed and controlled studies taking several years; and

Long-term Investigations: investigations of the fundamental relationships between exposure to toxic substances and disease.

ATSDR has begun to some extent to provide these services. However, there are several problems with ATSDR's performance of these functions which need to be addressed. Most important, consultations and assessments have been provided almost exclusively to EPA, to assist it in studying sites for remediation. The Agency initiated only two new full-scale health studies since Superfund's enactment. What is needed is a mechanism to assure that the Agency's focus is broadened beyond remediation to activities which will provide new information on and understanding of health effects. In addition, the Agency's services should be made available to those exposed to toxic chemicals by providing them with information on the nature and extent of their exposure and its likely health effects. Finally, the Congress should set a modest schedule for the initiation of health studies, to assure that the Agency achieves a reasonable pace in health studies and to help assure that the money needed is available from EPA.

We believe that this may most easily be accomplished by providing standards for the provision of these services in the statute. In brief, we think that any person should be able to receive a brief health consultation, perhaps no more than a telephone call with a health professional, depending upon the circumstances and the needs of the caller. After the consultation, if the person's questions were not satisfactorily answered or if the information in the response warrants, he or she should be able to request a more extensive follow-up health assessment. The Agency should conduct the assessment or provide the person with its reasons for declining to do so. At the end of the assessment, the Agency should determine whether a health study would be scientifically feasible and useful to determine further the nature and extent of the health effects at the site. In view of the Agency's slowness in initiating such long-term health studies, the Agency should be required to

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initiate at least ten health studies each year. The nature of these services and the standards for providing them are discussed in more detail below.

Health consultations

A health consultation is a brief consultation with health professionals to provide basic health advice or basic health effects information concerning exposure to toxic substances. ATSDR provided over 600 such consultations to communities and EPA in the last two years as part of its health related duties under Superfund. A health consultation -- sometimes no more than a short telephone call with a knowledgable professional, sometimes an extended consultation with a site visit, depending upon circumstances and community needs -- should be available on request by any person and should be completed within thirty days. Such consultations, in our experience, do much to alleviate the anxiety and frustration that people experience when they have reason to believe that their homes, their drinking water, or their environment has been contaminated (e.g., the water smells or tests show it contains certain contaminants). Presently, they have nowhere to turn to get rapid and responsive information on likely health effects.

Such a consultation will frequently answer the questions of the person requesting it. In some cases, however, it may not be adequate to do so or it may raise further questions. In these cases, the person should have the right to request a more extensive health assessment. In such cases, the Administrator should conduct the assessment unless he determines that there has been no exposure or that the exposure does not create a potentially significant risk to public health. The Administrator should provide brief reasons for such a determination to the person requesting the assessment.

Health assessments

A health assessment is more comprehensive than a health consultation, but should be completed within six months. It is significantly less extensive than a health study, described below. A health assessment consists of an initial multi-disciplinary review of all available data, through the information facility established by CERCLA and other sources, to assess the potential magnitude and nature of any health threats at a site. The assessment focuses on determining (1) what chemicals people are being exposed to, by using existing tests or performing limited tests on soil, drinking water, the food chain, and potentially exposed people themselves; (2) what toxicological effects those chemicals have on health, by searching the literature and summarizing information; and (3) what health abnormalities (if any) are found in exposed people, through testing and clinical studies of such people and examinations of their medical records. The Administrator could also use other methods of investigation consistent with the scope of the assessment. An assessment is not a health study, since it has no formal epidemiological design, and is not a conclusive method of associating exposure with observed health effects, but may be done much more quickly and on a very small population.

The Administrator should conduct a health assessment whenever he or she determines, on the basis of a health consultation or otherwise, that exposure to toxic substances and that the potential for a significant risk to human health exists. The Administrator should routinely make such a determination at the conclusion of each health consultation and during any public health emergency related to toxic substances; he will also become aware of other situations where a health assessment is required under this standard. At the conclusion of each health assessment, the Administrator should determine, under the criteria set forth below, whether a more extensive site-specific health study should be conducted.

Site-specific health studies

A health study comprises a long-term (typically more than six months) carefully designed epidemiologic study designed to discover the actual health effects and their toxicological causes at a site or at several related sites. Substantial environmental and epidemiological data is collected from the site(s) and from exposed persons. An epidemiological study is more comprehensive than a clinical study in that it not only evaluates the health status of selected people, as a clinical study does, but it also seeks to study the whole group of exposed people to determine possible confounding factors (such as the effects of smoking) and to compare the studied group with other groups in order to determine the rates of any health effects or abnormalities observed. For these purposes, an epidemiological study requires relatively large numbers of people and the ability to obtain relatively complete health related information on them in order to detect significant differences upon comparison with unexposed groups. As discussed by the Agency and many other authorities, there are certain conditions necessary for the successful conduct of a health study, including sufficient numbers of people for statistical purposes; the ability to characterize exposure, at least qualitatively; the availability of information on health, employment, and other factors; the ability to set up a study with minimal bias (that is, the willingness of people to join the study, objective measures of health effects, controls for recall, and so forth).

At the conclusion of each health assessment and each time a site on the National Priority List is studied for remediation (in connection with EPA's Remedial Investigation and Feasibility Study), the Administrator should determine whether a site-specific health study would be scientifically feasible and also whether such a study would be useful to determine further the

nature and extent of potential health effects at the site. The Administrator should conduct a health study unless his determination is negative and he publishes a brief statement of reasons for that determination in the Federal Register.

These provisions may result in a relatively small number of health studies. Because the Agency has been so slow in initiating health studies, and because more long-term health studies are clearly needed to understand the health effects of toxic substances, the statute should set a reasonable minimum number of health studies to be initiated each year. Such a provision would also help to assure that OMB and EPA make the funds available for such studies at the pace provided, and that health studies are not arbitrarily terminated or curtailed for lack of funds, as happened at East Helena, Montana, and other sites.

Health studies are resource-intensive to develop and initiate. They may cost on the order of $1.5 million each. Poorly conducted health studies, such as EPA's Love Canal chromosome study, are wasteful, damaging, and destructive to everyone involved. A well conducted health study takes about 12 to 18 months to develop and set up, and an additional 12 months to analyze, for a total of about 2 to 2-1/2 years per study. With 100 full-time equivalents, ATSDR would probably be able to conduct about 20 studies at any one time. This may include combining several sites into one study, such as the various PCB studies now underway, and the smelter studies in Montana. Requiring ATSDR to do more at this time would probably be counterproductive. Forcing it to do, for example, 100 health studies per year would probably produce fairly stereotyped (and relatively insensitive) studies with a standardized design (such as mortality records studies) rather than providing the opportunity to develop truly site-specific health studies. We therefore believe that the statute should require that 10 health studies should be initiated each year.

Investigations of the relationships between exposure to toxic substances and human health

While site-specific health studies will contribute to the understanding of the health effects of particular toxic substances and exposures at specific sites, they cannot provide the whole picture. Broader investigations, which pull together demographic and health information from around the country, from sites and other sources, and which initiate advances in laboratory and clinical studies as needed, will be necessary to develop our understanding of toxic substances and human health, particularly with respect to the possible synergistic effects of exposure to several substances. This is especially true for serious diseases which may have a low rate of incidence and/or take a long time to develop, such as cancer. The continuation of ATSDR's registry of individuals with rare and sentinel diseases can form a part of this effort. Registries of individuals with other serious diseases should also be undertaken, since toxic substances do not cause only rare diseases. These registries can form one important source of information for the broad investigations needed. The NHANES study of lead poisoning in the U.S., 1976-1980, is an example of the invaluable contributions of such fundamental national investigations. We believe that the statute should be clarified to indicate explicitly that investigations of the fundamental relationships between exposure to toxic substances and human health are a part of ATSDR's mandate, and that the establishment of national registries of those with serious diseases and sentinel diseases is a part of this mandate.

Petition for a health effects study

The graduated system we have proposed above is, in our view, consistent with the draft bill's provision for a health effects

study that may be petitioned for under subsection (3) of the section on toxicological data. The petition simply provides a separate way for citizens to obtain health information. The study envisioned in the draft bill appears more extensive than what we have called a health study, since it also includes a determination of the source of any groundwater contamination.

We believe several changes should be made to this subsection, however. Subparagraph (A)(2), which provides that in order to receive a health effects study, petitioning individuals must present evidence that "demonstrates a reasonable likelihood that such individual or individuals suffer from levels of ill health in excess of what is to be expected . . . ." Evidence of this nature would probably require the petitioning individuals to have conducted a prototype health study in the first place, since collection of this kind of data usually requires considerable effort. To require that such data be presented before a health effects study can be obtained is self defeating. The requirement in subparagraph (1) for evidence of exposure to a hazardous substance, pollutant, or contaminant will be difficult enough to obtain, and may be all that can reasonably be expected before a health effects study is done.

The requirement in subparagraph (A)(3) that there be evidence as to the probable source and that there be evidence that it is a release under the Act presents similar problems. Securing information of this kind is one of the objectives of the health effects study, to the extent that it is to "determin[e], where possible, . . . the source of any groundwater contamination involved." Petitioning individuals cannot be expected to have any significant evidence on the source of their exposure before the health effects study has been conducted; at most they may know of a release in their vicinity, but they should not be required to know this or to show that it is the source of their exposure before a study is considered. A showing of probable exposure should be sufficient to require the

Administrator to consider the petition. The sixty days which the Administrator has to act on the petition should be sufficient to decide whether a study is warranted.

The provision in subparagraph (C)(iii)(I) for a "determination . . . of the source of any groundwater contamination" is important in that groundwater contamination is one important route by which people are exposed. However, other routes may also be important, including air pollution, surface water contamination, and the contamination of airborne dust. The objective should be to determine the source and pathways of exposure so that appropriate responses, including those under subparagraph (D) can be selected and executed. Pathways other than groundwater contamination should be mentioned in the statute to insure that they are not ignored.

Assessments and studies in response actions

The provision in the draft bill amending section 105(8)(B) to provide for an assessment as part of the response to a release is an important and appropriate addition. A health assessment is an important tool to help determine the nature and timing of the response required. The bill should indicate that the assessment should be performed as early in the process as possible -- with an emergency response, if one is conducted, or otherwise with EPA's Remedial Investigation and Feasibility Study.

The criteria for a health effects study as part of remediation, however, are not appropriate. The purpose of the assessment is to determine the likely health effects, now or perhaps many years in the future. If the assessment reveals a significant risk to public health, the elimination of that risk under draft subsection 104(i)(3)(D) should be undertaken immediately; a health effects study is unnecessary for this purpose. Moreover, even if there has been significant exposure and

a clear risk to public health, health effects still may not appear for many years. A registry is clearly more appropriate to assure that those health effects are eventually detected than a health effects study would be.

As we mentioned above, a study is appropriate only where it is useful to further determine the nature and extent of health effects at a site and where it is scientifically feasible. If the health effects of the substances of concern are well known, as they are for lead and asbestos, for example, then a study of health effects at the site would not be useful. It would simply show once again what the already well known effects of exposure to the particular substances were or, if there were only long-term effects, such as cancer, it would probably show nothing. For the purpose of determining health effects of well characterized substances in exposed people, a registry is the most powerful and economic tool.

In addition, if a study is not scientifically feasible under the circumstances at the site, the most desperate need for knowledge will not somehow make a "study" show something. As the Love Canal chromosome studies demonstrated, great quantities of money and resources can be expended to no avail if the circumstances will not permit reliable conclusions to be drawn from the information that can be obtained. There are several reasons why a health study may not be feasible. (1) There may be too few people to study. This depends upon the type of exposure and type of effect anticipated. For example, because of what we know about lead poisoning, it is possible to do a health study on very few people if lead is suspected to be present; however, for solvent exposures, where we know much less and have poor methods for detecting exposure, larger groups are needed. (2) Evidence of exposure may be poor. If the only evidence for exposure is inferential (such as proximity to a dump site) rather than direct (such as the detection of toxic substances in tissue), then it is likely that unexposed people

cannot be clearly separated from exposed people, and the results of the study may appear to be negative. (3) Obtaining cooperation for conducting an adequate health study may be impossible. A number of factors may lead to failure to participate in a health study, including litigation, moving away, lack of interest, or religious convictions.

In sum, health studies should not be thought of as tools to guide individual remediations. The purpose of Superfund remediations is to clean up sites whether or not there are demonstrable health risks -- that is, prevention not cure. Its enactment represents a step beyond Love Canal, where substantial investigation was needed to persuade the Government that health effects were occurring and action was necessary. Health assessments, which combine a study of exposure at the site primarily with known information on the health effects which can be predicted from that exposure, but also with clinical examinations of exposed persons, are the appropriate tool for remediation. If a health assessment or other information reveals a significant risk to health, removal of the risk need not and should not await a health study. Any undertaking which requires 2-1/2 years can hardly be the first line response to an emergency.

A health study is a carefully designed research tool to gain new knowledge about the connection between exposure and health effects. A study may not be necessary or possible at any particular site, and its appropriateness is not necessarily correlated with a significant risk to public health. Studies are most useful at sites where existing data is scanty and where the risk to health is unclear. Their results are likely to be timely only in cases where there is little other data to go on and no clear emergency, but when well done they may ultimately be valuable at many other sites by providing data that future health assessments can draw on.

Information on particular toxic substances and mixtures

We have described above a system of graduated health services to gather and provide information about the health effects from toxic substances at particular sites, and to conduct long-term investigations. As a necessary part of this system the Agency also needs to conduct laboratory studies and testing on the health effects of particular toxic substances. The possible synergistic effects of mixtures of substances commonly found at dumpsites are of particular importance and should also be studied. While there is information about the health effects of many of the most commonly found chemicals, considered in isolation, little has been done to investigate their synergistic effects beyond recognizing that they may be very important. Finally, much of the information available on toxicity is in a form accessible only to a person with substantial experience in toxicology; this and newly acquired information on health effects need to be put in a form accessible to most public health officials.

The section of the draft bill on toxicological data, subsection (a)(2), adding subsections (2)(A) through (C) to section 104(i) of CERCLA, properly recognizes the need for additional data on toxic substances commonly found at dumpsites and provides a program to obtain that data and put it into useful form. We believe that this provision is very important and support its overall approach. However, it should be reoriented in certain particulars. First, subparagraph (A) should not focus entirely on hazardous substances alone, but should be primarily addressed to mixtures of such substances, pollutants, and contaminants commonly found or released together. The Administrator's selection of 100 substances for study sets priorities for research and, since common mixtures may have synergistic effects substantially greater than their components alone, it is more important to study common mixtures before

studying less common chemicals.

Subparagraph (B) properly recognizes the importance of studying the health effects of mixtures, but the particular kinds of studies it mandates should be more comprehensive. In order to determine health effects, it is important to know how a person is most likely to come into contact with a substance, whether by inhalation, ingestion, skin contact, or otherwise -- that is, the route or pathway of exposure. For example, one of CDC's contributions to dealing with dioxins in Times Beach and other Missouri towns was the observation that the primary route of exposure was through breathing dust to which dioxin had adhered. In determining routes of exposure, it is useful to know the environmental fate of a substance released in various ways into the environment. Finally, we believe that the specificity of the provision mentioning "organ-specific, site-specific, and system-specific toxicity" may actually work against the achievement of the program's objectives. Since many health effects do not necessarily fall within this particular breakdown of health effects, the specificity of the section may be used as a excuse not to look for health effects which do not fit within these three categories. In sum, we recommend that subparagraphs (i) through (iv) require comprehensive laboratory and other studies, both shortand long-term, to determine the environmental fate, routes of exposure, metabolism and bio-kinetics, and the range of toxic health effects associated with exposure to such substances, including such human data as is available or can be collected.

Subparagraph (C) properly suggests that a toxicological profile is more than just a collection of data on health effects. We believe that this subparagraph should be explicitly state that such profiles should be succinct summaries of the health effects discovered, in a style accessible to public health officials without substantial training in toxicology, with references to research and studies for those who can make

use of them. CDC's recent profile on ethylene dibromide is an excellent example of what is required.

Subsections (2)(A) through (C) speak solely in terms of the Administrator of EPA. We think that ATSDR should be substantially involved in this effort, since it houses, or will house, the Government's primary expertise in evaluating the health effects of toxic substances. In particular, the Administrator's selection of substances in subparagraph (A) should be made in consultation with the Administrator of ATSDR and the Director of the National Toxicology Program, since a thoughtful selection will involve not only a determination of which chemicals are most common, but also which are most likely to cause serious health effects or otherwise are in need of further study. The studies in subparagraph (B) should be conducted by ATSDR, in consultation with EPA. Finally, having conducted the studies, ATSDR is in the best position to assemble the profiles in subparagraph (C).

Other items in ATSDR's current mandate which need strengthening

There are several other items in ATSDR's current mandate under CERCLA section 104(i) which need strengthening.

Information system on the health effects of toxic substances

With the cooperation of the National Library of Medicine, ATSDR has made a good start at assembling the information system required by section 104(i)(2). However, the existing system needs improvement in several respects. First, it needs to be made truly accessible to the public. The present system is usable only by those with special training in toxicology and computer data bases. A system which is accessible to local public health officials, who need to learn quickly about substances which are suddenly discovered or released in their

jurisdictions, would be much more useful. ATSDR requested funds for this purpose, but they were deleted by OMB. The Agency's mandate should be clearer on the need for public accessability to the information system.

Second, the system needs to be more comprehensive. As more information becomes available from the compilation of toxicological profiles and other sources, it should be rapidly compiled and entered into the system. The Agency was embarked on this program, but its funds were deleted by OMB. Its mandate should be clearer in this regard.

Listing of all closed or restricted areas

A complete listing of all areas or facilities closed to the public or restricted in use because of contamination by toxic substances is now required by section 104(i)(3). This listing is important to understanding the physical magnitude of the problem of toxic contamination and will also provide a useful inventory for states attempting to recover the value of damaged natural resources. The consent decree settling EDF's lawsuit requires ATSDR to complete this listing in 18 months (by November, 1984) but ATSDR is only now arranging for a pilot study of two states and does not plan to begin the listing for all 50 states until the pilot study is completed. ATSDR has proceeded unreasonably slowly, considering that the task is not complicated and involves no complex policy decisions. The task can be done in 18 months and the statute should mandate an 18 month deadline from the date of enactment of the amendments.

The statute should also assure that the listing is comprehensive and includes drinking water wells, acquifers, sources, and supplies, and also limitations on the raising of crops or livestock or the taking or consumption of fish or other wildlife from contaminated environments.

Other items which should be added to ATSDR's mandate

Health effects information must be applied to health-related problems in order to be useful. There are three specific activities which ATSDR should undertake to assure that this is done and that the Agency's expertise is appropriately applied.

Guidelines for exposure and risk assessments

EPA is considering requiring health-related exposure assessments and health-related risk assessments as part of its process of studying sites for remediation. A health-related exposure assessment is an assessment of exposure to toxic substances by the use of demographic data and by an examination of routes of exposure and of potentially exposed persons, through such means as blood or tissue samples, biological markers, or other means to determine the level and/or duration of exposure to toxic substances. A health-related risk assessment is a quantitative estimation of the nature and frequency of health effects which may result from a given level of exposure to particular toxic substances. Both kinds of assessments require expertise in the health sciences and toxicology.

ATSDR's expertise should be brought to bear on such assessments by requiring the Agency to develop guidelines for the performance of health-related assessments. The statute should also require other agencies to follow these guidelines when they perform such assessments. This will assure that whenever agencies determine to undertake such assessments, the assessments conform to the standards of public health and preventive medicine.

Research on detecting low level exposures and evaluating sensitive indicators of exposure

Some of the toxic substances found in hazardous waste dumps may be toxic to people at levels of exposure which are below those detectable even with today's most sophisticated analytic techniques. For many substances, such as carcinogens, there is no "safe" level below which no ill effects are likely in a large population. Low levels of exposure need to be detected so that treatment and/or removal of the exposure can be undertaken early, before the resultant health effects are observed. The statute thus should require ATSDR to conduct and sponsor research to develop and improve methods for detecting in people low levels of exposure to toxic substances.

In addition, the first indication of exposure to toxic substances may be the appearance of early biological changes which precede the appearance of health effects in exposed people. The earliest and most sensitive indicators of exposure may not be recognized for what they are, and exposure may thus continue for some time before toxic substances are identified as the source of a health problem. The statute thus should say ATSDR to conduct and sponsor research for evaluating early & sensitive preclinical indicators of exposure and effects in exposed populations.

Training of scientists and clinicians

Subsection (6)(B) of the section of the draft bill on toxicological data provides for ATSDR to "establish and maintain a program of clinical training for physicians and other health professionals" which we strongly support. We believe that the most important need is for scientists and clinicians to be trained to recognize and understand the subtle as well as the more obvious manifestations of toxic diseases and environmental

impact so that the indicators of toxic exposure mentioned in the previous paragraphs may be applied in actually detecting exposures as early as possible. In addition, ATSDR can most effectively provide this training if it is empowered to provide grants for such training.

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TECHNICAL APPENDIX

Our comments on the draft bill to reauthorize Superfund refer to several technical concepts in discussing registries of persons exposed to toxic substances. This appendix discusses when a registry is scientifically appropriate, when a registry is scientifically valuable, and what data a registry should contain.

"Scientifically appropriate"

In deciding whether a registry is scientifically appropriate, the Administrator should consider factors such as the ability to follow up the population and to obtain data; the ability to establish exposure history; the absence of overwhelming confounding variables (such as occupational exposures in addition to environmental exposures from hazardous waste sites); and sufficient size of the population.

In determining whether a population is of sufficient size, both cohort and case/referent designs must be considered. A cohort design for a registry means that a group is identified and followed to determine the life and health history of the group (usually in comparison with an identified control group or with the U.S. population as a whole). A case/referent study selects only cases (diseased persons or deceased persons) and then matches them for purposes of determining whether there is an association between an exposure and a particular disease or cause of death. For cohorts, fairly large groups are needed; for case/referent studies, very small groups can be valuable.

"Scientifically valuable"

The decision whether a registry is scientifically valuable should be based on such factors as the potential to further the knowledge of health effects of toxic substances; the relative significance of the registry in comparison with other registries; and the need for the registry to understand toxic disease or to predict individual or group outcomes. The Administrator must also consider the value of registries in assisting individuals in protecting their health -- e.g., advising asbestos-exposed persons not to smoke.

Data a registry should contain

An active registry should contain exposure data, health effects data, and other data essential to further study, particularly identifiers permitting follow-up. Exposure is frequently difficult to determine. Data from indicators of exposure, such as biological monitoring, analyses of tissue and blood samples, and other indicators of the body burden of toxic substances, provide a basis for determining levels of exposure to various toxic substances at the site and the variation in exposure level among individuals. Demographic data, including residential history, may also be useful as further inferential indicators of exposure. Complete data on acute and chronic health effects, including data on mortality and morbidity (death and serious disease), early clinical and preclinical effects, and such other health endpoints as are appropriate to the specific exposures involved, are needed if the early and subtle as well as the more pronounced health effects are to be identified. Data on early clinical and preclinical effects can also assist in earlier detection of exposure in others not otherwise known to have been exposed.

Isolating the health effects attributable to toxic exposure requires that the health and illnesses of exposed persons be compared with unexposed persons or with national norms. However, since demographic and socioeconomic background and other confounding variables also affect health, data on these variables must be collected so that accurate comparisons with appropriate norms can be made. In addition, the identification of specific population cohorts and specific geographic locations of exposed persons is necessary if future follow-up analyses are to be performed to study long-term health effects such as cancer.

Finally, if maximum use is to be made of exposure registries, data must be collected in a uniform manner at various sites so that accurate comparisons and aggregations can be made. Since different State and local agencies will play an important part in maintaining registries, and frequently have different methods of data collection, it is especially important that the ATSDR establish uniform methods of data collection.

STATEMENT

before the

SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

on

SUPERFUND REAUTHORIZATION

by

HAROLD SCHAITBERGER, DIRECTOR OF LEGISLATION

RICHARD DUFFY, OCCUPATIONAL SAFETY AND HEALTH COORDINATOR

INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS, AFL-CIO-CLC

May 24, 1984

I AM HAROLD SCHAITBERGER, DIRECTOR OF LEGISLATION FOR THE INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS. I AM ACCOMPANIED BY RICHARD DUFFY, OCCUPATIONAL SAFETY AND HEALTH COORDINATOR AND THE INDUSTRIAL HYGIENIST. ON BEHALF OF THE IAFF, WE APPRECIATE THE OPPORTUNITY TO ADDRESS THE COMMITTEE ON THE REAUTHORIZATION OF SUPERFUND (PL 96-510).

PRIOR TO ADDRESSING SOME OF THE RESEARCH NEEDS, WE BELIEVE SHOULD BE PERFORMED UNDER SUPERFUND, WE BELIEVE IT IS IMPORTANT FOR YOU TO UNDERSTAND WHAT OUR ORGANIZATION IS AND WHO WE REPRESENT AT THESE HEARINGS.

THE IAFF IS AN INTERNATIONAL UNION AFFILIATED WITH THE AFL-CIO AND THE CANADIAN LABOR CONGRESS. AT THE PRESENT TIME, WE REPRESENT APPROXIMATELY 170,000 PAID PROFESSIONAL FIRE SERVICE EMPLOYEES IN THE UNITED STATES AND CANADA. THE MEMBERSHIP OF THE IAFF IS EMPLOYED BY VARIOUS PARTIES WHICH INCLUDE: THE FEDERAL GOVERNMENT, STATES, COUNTIES, MUNICIPALITIES, FIRE DISTRICTS, AIRPORTS, INDUSTRIAL MANUFACTURERS, AMUSEMENT PARKS, AND SO ON.

THE IAFF HAS BEEN ACTIVELY INVOLVED IN THE HEALTH AND SAFETY PROBLEMS OF FIRE FIGHTERS FOR THE PAST TWENTY-FIVE YEARS. EACH YEAR WE CONDUCT AN ANNUAL DEATH AND INJURY SURVEY WITH THE COOPERATION AND PARTICIPATION OF VARIOUS FIRE DEPARTMENT

ADMINISTRATORS. THIS SURVEY HAS SHOWN THAT FIRE FIGHTING IS THE MOST HAZARDOUS OCCUPATION IN THE UNITED STATES.

DURING THE TEN YEAR PERIOD, 1973-1982, PROFESSIONAL FIRE FIGHTERS AVERAGED 78 LINE-OF-DUTY DEATHS, 89 DEATHS DUE TO OCCUPATIONAL DISEASES, 1,112 FORCED RETIREMENTS, AND 45,530 INJURIES ANNUALLY. FIRE FIGHTER FATALITIES WERE MORE THAN DOUBLE THOSE OF POLICE OFFICERS AND ALSO RANKED ABOVE OTHER PUBLICIZED HAZARDOUS OCCUPATIONS, SUCH AS MINING AND CONSTRUCTION. THE DATA ALSO SHOWED THAT OVER 40% OF ALL FIRE FIGHTERS CAN BE EXPECTED TO BE INJURED AT LEAST ONCE DURING THE COURSE OF A SINGLE YEAR. COMBINED, HEART DISEASE AND CANCER CONSTITUTED MORE THAN 90% OF ALL REPORTED FIRE FIGHTER DEATHS DUE TO OCCUPATIONAL DISEASES.

CURRENTLY, THIRTY-SEVEN (37) STATES IN THE UNITED STATES HAVE LEGISLATION NOW IN EFFECT, WHICH IN THE MAJORITY OF CASES "AUTOMATICALLY PRESUMES" THAT IF A FIRE FIGHTER CONTRACTS HEART OR LUNG DISEASE THAT IT HAS OCCURRED DUE TO HIS PROFESSION. IN ADDITION, CALIFORNIA AND ILLINOIS HAVE RECENTLY ADOPTED THE FIRST LEGISLATION IN THE COUNTRY WHICH "AUTOMATICALLY PRESUMES" THAT IF A FIRE FIGHTER CONTRACTS CANCER THAT IT IS OCCUPATIONALLY INDUCED.

WHILE CALIFORNIA AND ILLINOIS ARE THE FIRST STATES TO ENACT PRESUMPTIVE BENEFITS FOR CANCER, WORKMAN'S COMPENSATION

BOARDS HAD ALREADY ESTABLISHED A HISTORY OF INDENTIFYING CANCER IN FIRE FIGHTERS AS EMPLOYMENT-RELATED. AN OCCUPATIONAL MEDICAL SPECIALIST, DR. JOHN B. WEBSTER, FOUND THAT AN OHIO FIRE FIGHTER'S LEUKEMIA WAS CAUSED BY HIS EXPOSURES TO CARCINOGENS. IN ADDITION, A STUDY OF TORONTO FIRE FIGHTERS OVER THE COURSE OF 25 YEARS FOUND THAT CANCER INCREASED STEADILY, FROM 15.4% IN 1945-9 TO 38.4% IN 1967-70. THE EPIDEMIOLOGICAL WORK PERFORMED THUS FAR ALSO SUGGESTS THAT CANCER IS AN OCCUPATIONAL DISEASE AFFLICTING FIRE FIGHTERS.

TO TRULY UNDERSTAND WHAT THESE STATISTICS MEAN AND WHY THEY EXIST, I WOULD LIKE TO TAKE THE NEXT FEW MOMENTS TO EXAMINE THE NATURE OF FIRE FIGHTING. FIRE FIGHTERS ARE CONSTANTLY MAKING TRANSITIONS FROM THE CALM, PEACEFUL ENVIRONMENT OF THE FIREHOUSE TO THE HOSTILITY PRESENTED BY FIRE. FIRE THAT IS BRUTAL ENOUGH TO DESTROY AN ENTIRE FOREST; WHOSE THERMAL DRAFTS STILL CREATE GALE-FORCE WINDS; THAT STILL CAUSES PARTS OF BUILDINGS TO WEAKEN AND FALL-IN OR COLLAPSE ON FIRE FIGHTERS; AND WHOSE AIR STILL LACKS ADEQUATE AMOUNTS OF OXYGEN AS THE PRODUCTS OF COMBUSTION FORM "SMOKE".

THESE CONSTANT TRANSFORMATIONS FROM QUIET TO RAGING INFERNOS HAVE NUMEROUS PSYCHOLOGICAL AND PHYSIOLOGICAL SIDE-EFFECTS. WITHIN 15-30 SECONDS AFTER THE FIRE ALARM SOUNDS, RESEARCH STUDIES HAVE FOUND THAT A FIRE FIGHTER'S HEART RATE CAN INCREASE

BY AS MUCH AS 117 BEATS PER MINUTE. IN ADDITION, A FIRE FIGHTER'S HEART CAN BEAT AT TWICE ITS NORMAL RATE THROUGHOUT THE ENTIRE FIRE FIGHTING OPERATION. THESE EXTREME PHYSIOLOGICAL STRESSES OBVIOUSLY LEAD TO SEVERE CORONARY PROBLEMS, WHICH HAVE BEEN DOCUMENTED BY NUMEROUS AUTHORITIES.

THE WORKING ENVIRONMENT CAN ALSO MEAN A TRANSITION FROM BELOW FREEZING TEMPERATURES TO TEMPERATURES BETWEEN 100 DEGREES AND 500 DEGREES FAHRENHEIT AT THE FIRE ITSELF. THESE TEMPERATURE EXTREMES CAN LEAD TO FROSTBITE ALONG WITH NUMEROUS CARDIOVASCULAR AND PULMONARY DISORDERS SUCH AS ACUTE CIRCULATORY COLLAPSE, HYPERTENSION, PNEUMONIA, AND BRONCHITIS.

FIRE FIGHTING INVOLVES STRENUOUS PHYSICAL ACTIVITY THAT IS MADE MORE BURDENSOME BY THE FACT THAT PROTECTIVE CLOTHING AND BREATHING APPARATUS A FIRE FIGHTER WEARS ADDS 45 TO 65 POUNDS. NEVERTHELESS, THE FIRE FIGHTER PERFORMS SUCH VITAL ACTIVITIES AS CARRYING HEAVY HOSE UP FLIGHT OF STAIRS, FIGHTING WATER PRESSURE TO KEEP THE HOSE POINTED AT THE FLAMES, CLIMBING ONTO ROOFTOPS CARRYING AXES TO VENTILATE THE BURNING STRUCTURE AND SO FORTH.

WHEN A FIRE DESTROYS A RESIDENTIAL HOME OR AN INDUSTRIAL FACTORY, IT REPRESENTS A WORK ENVIRONMENT THAT CLOSELY RESEMBLES, AT FIRST GLANCE, WHAT FIRE FIGHTERS FACED SEVERAL HUNDRED YEARS AGO. HOWEVER, TECHNOLOGY HAS CREATED A DISTINCT DIFFERENCE IN THE MODERN FIRE ENVIRONMENT: POLYVINYLCHLORIDE,

POLYCHLORINATED BIPHENYLS, ACRYLIC, PHENOL, POLYSTYRENE, AND UREA-FORMALDEHYDE TO NAME JUST A SELECT FEW. WHAT ARE THESE NEW STRANGE-SOUNDING CHEMICALS? THEY ARE COMMONPLACE INGREDIENTS IN OUR ENVIRONMENT AS COMPONENTS OF HOUSEHOLD FURNITURE, PLASTIC PIPES, BUILDINGS, WALL COVERINGS, AUTOMOBILES, BUSES, AIRPLANES, TRANSFORMERS AND COVERINGS FOR ELECTRICAL AND OTHER INSULATION MATERIALS.

THE RAPID PROLIFERATION OF THESE CHEMICALS IN OUR SOCIETY HAS CAUGHT THE SCIENTIFIC COMMUNITY OFF-GUARD. THERE ARE SIMPLY TOO MANY NEW CHEMICALS AND TOO FEW FUNDS TO RESEARCH ALL OF THEIR POTENTIAL HAZARDS. SINCE THE BEGINNING OF WORLD WAR II, THE PRODUCTION OF SYNTHETIC CHEMICALS HAS INCREASED 350-FOLD. WITH THE ADDITION OF THOUSANDS OF NEW CHEMICALS ANNUALLY, IT BECOMES IMPOSSIBLE TO STUDY THE CARCINOGENIC PROPERTIES OF EACH AND EVERY ONE OF THEM. THE 1980 NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES CONTAINS MORE THAN 45,000 SUBSTANCES, WHICH HAVE BEEN SHOWN TO PRODUCE SOME TYPE OF TOXIC EFFECT ON ANIMALS AND/OR HUMANS. NIOSH ESTIMATES THAT THERE ARE APPROXIMATELY 100,000 SUBSTANCES THAT MAY HAVE SOME TYPE OF TOXIC EFFECT. OF THE SUBSTANCES LISTED IN THE REGISTRY, ALMOST 3,000 HAVE DEMONSTRATED A POSITIVE RELATIONSHIP TO CARCINOGENICITY.

THE POTENTIAL OF THESE CHEMICAL SUBSTANCES TO CAUSE BODILY HARM TO THE FIRE FIGHTER IS DEPENDENT UPON MANY FACTORS AT THE FIRE SCENE: THE LEVEL OF CONCENTRATION, RESPIRATORY RATE AND VOLUME, TIME OF EXPOSURE, CLOTHING WORN AND TYPE OF RESPIRATORY EQUIPMENT USED. UNLIKE EVEN HUMAN SKIN, WHICH CAN RESIST CERTAIN MATERIALS, THE LUNGS LACK ANY PROTECTION TO RESIST THESE TOXIC SUBSTANCES. IN ADDITION, THESE TOXIC MATERIALS CAN BE ABSORBED BY A SURFACE AREA IN THE LUNGS THAT IS FORTY (40) TIMES GREATER THAN THE BODY'S OUTSIDE SURFACE AREA.

THE HEALTH EFFECTS CAN BE SHORT-TERM OR EVEN INITIALLY NON-EXISTENT. SUCH EXPOSURES CAN AND DO RESULT IN LONG-TERM ILLNESSES INVOLVING THE CARDIOVASCULAR SYSTEM, THE RESPIRATORY SYSTEM, THE CENTRAL NERVOUS SYSTEM AND OTHER BODY ORGANS.

THE FIRE FIGHTER'S NATURAL INSTINCT IS TO RESPOND TO THE SCENE AND WORK IMMEDIATELY TO SAVE LIVES AND REDUCE PROPERTY DAMAGE WITHOUT REGARD TO THE POTENTIAL HAZARDS THAT MAY EXIST. A FIRE OR OTHER EMERGENCY INCIDENT HAS NO CONTROLS OR OCCUPATIONAL SAFETY AND HEALTH STANDARDS TO REDUCE THE EFFECT OF TOXIC SUBSTANCES. IT IS AN UNCONTROLLABLE ENVIRONMENT THAT IS FOUGHT (AT BEST AND OFTEN TIMES) BY FIRE FIGHTERS USING INADEQUATE PERSONAL PROTECTIVE EQUIPMENT. THE FOLLOWING EXAMPLES ILLUSTRATE THE PLIGHT OF FIRE FIGHTERS.

IN APRIL 1980, A FIRE BROKE OUT AT A CHEMICAL DUMP SITE IN ELIZABETH, NEW JERSEY. THE STATE, WHICH HAD TAKEN OVER THE SITE TWO YEARS EARLIER, HAD INVENTORIED AND REMOVED 10,000 OF THE APPROXIMATELY 50,000 DRUMS OF CHEMICAL WASTE PRESENT AT THE SITE. WHILE THE FIRE WAS IN PROGRESS, NO ONE WAS AWARE OF WHAT THOSE REMAINING 40,000 DRUMS CONTAINED. FIRE FIGHTERS FOUGHT THE FIRE FOR ELEVEN (11) HOURS AND REMAINED ON THE SCENE FOR DAYS; MOSTLY WITHOUT RESPIRATORY PROTECTIVE EQUIPMENT BECAUSE NONE WAS AVAILABLE.

THE IAFF IMMEDIATELY REQUESTED THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) TO CONDUCT A HEALTH HAZARD EVALUATION AND THEY RESPONDED BY BEING AT THE SCENE THE NEXT DAY. NIOSH FOUND THAT A HIGH PERCENTAGE OF FIRE FIGHTERS WERE EXPERIENCING SOME SYMPTOMS AT THE TIME OF THEIR MEDICAL SCREENING, 7 TO 10 DAYS AFTER THE FIRE. NOSE AND THROAT IRRITATION WAS THE MOST COMMON SYMPTOM ALONG WITH ACUTE RESPIRATORY PROBLEMS, SUCH AS COUGHING, WHEEZING AND SHORTNESS OF BREATH. THERE WERE ALSO A HIGH PREVALENCE OF SKIN DERMITITIS DUE TO CHEMICAL BURNS.

HOWEVER, THE FULL EFFECTS OF THIS FIRE ARE STILL UNKNOWN. THE POSSIBILITY OF CHRONIC DISEASES DEVELOPING HAS CAUSED NIOSH TO UNDERTAKE A LONG-TERM EVALUATION OF THE ELIZABETH FIRE FIGHTERS.

BESIDES THE OBVIOUS IMPLICATIONS OF THE NIOSH HHE ARE TWO GLARING EXAMPLES OF THE LACK OF PROPER PROTECTIVE EQUIPMENT AND TRAINING FOR FIRE FIGHTERS THAT OCCURRED IN ELIZABETH, NEW JERSEY.

THE FIRST EXAMPLE IS ILLUSTRATED IN A PICTURE TAKEN OF A FIRE FIGHTER ROWING A BOAT WITH A FEDERAL INSPECTOR ON BOARD. IN THIS PICTURE, THE FIRE FIGHTER IS WEARING HIS NORMAL CLOTHING WHILE THE FEDERAL WORKER IS PROTECTED BY AN ELABORATE CHEMICAL PROTECTIVE SUIT. OBVIOUSLY, NO FURTHER EXPLANATION IS NEEDED.

THE SECOND EXAMPLE ALSO OCCURRED AFTER THE FIRE WHEN THE FIRE FIGHTERS TOOK THE HOSE BACK TO THE STATION AND BEGAN CLEANING IT. THE SUBSTANCES ON THE HOSE WERE DRAINING RIGHT BY A MOBILE VAN THAT ACTED AS HEADQUARTERS FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) AND COAST GUARD UNTIL AN IAFF STAFF PERSON POINTED OUT THAT THE HOSE CONTAINED THE SAME TOXIC CHEMICALS THAT WERE PRESENT AT THE DUMP SITE.

IN APRIL 1980, SOMERVILLE, MASSACHUSETTS FIRE FIGHTERS WERE AT THE SCENE WHEN A RAILROAD SWITCHER ENGINE MOVING 38 CARS COLLIDED WITH A TANKCAR. THE FIRE FIGHTERS FOLLOWING DEPARTMENT OF TRANSPORTATION AND BUREAU OF EXPLOSIVES EMERGENCY GUIDELINES DIRECTED FIRE HOSES ON THE LIQUID CHEMICAL IN THE TANKCAR TO KEEP IT FROM ENTERING THE CITY'S SEWER SYSTEM. HOWEVER, THE

CHEMICAL, PHOSPHORUS TRICHLORIDE, HAS A VIOLENT REACTION WITH WATER. THUS, NEW CLOUDS OF ACID VAPOR WERE FORMED. THE SHIPPER, MONSANTO INDUSTRIAL CHEMICAL COMPANY, RECOMMENDED THAT THE FIRE FIGHTERS FLOOD THE CHEMICAL WITH WATER. BASED ON THE PREVIOUS RESULTS, THE FIRE FIGHTERS DID NOT IMPLEMENT THEIR SUGGESTION. EVENTUALLY THE FIRE FIGHTERS DID RELENT TO AN EPA REQUEST TO FLOW WATER TO REDUCE THE ACID CLOUD. A SHIFT IN WIND DIRECTION INDUCED THE FORMATION OF STILL MORE ACID VAPOR. EVENTUALLY 23,000 PEOPLE IN A ONE-AND-A-HALF SQUARE AREA HAD TO BE EVACUATED. SCORES OF FIRE FIGHTERS WERE TREATED FOR SKIN BURNS FROM CONTACT WITH THE PHOSPHORUS TRICHLORIDE AND RESPIRATORY PROBLEMS. UNAWARE OF THE NEED FOR SPECIAL PROTECTION, FIRE FIGHTERS ASSUMED THEIR NORMAL "TURNOUT GEAR" PROVIDED SUFFICIENT PROTECTION. AFTER THE INCIDENT, THE NATIONAL TRANSPORTATION SAFETY BOARD ISSUED A REPORT CITING THE PROBLEMS CAUSED WHEN THE FEDERAL GOVERNMENT, THE SHIPPER AND OTHERS PROVIDED GUIDELINES AND TECHNICAL ADVICE THAT WERE "INADEQUATE, INCONSISTENT AND CONFUSING".

IN JUNE, 1981, FIRE FIGHTERS RESPONDED TO A FIRE AT LIQUID DISPOSAL INCORPORATED (LDI) IN SHELBY TOWNSHIP, MICHIGAN. LDI'S STAFF AT THE SCENE WAS SURPRISED WHEN ONE OF THE SITE'S CONTRACTORS, WHO IDENTIFIED HIMSELF AS AN "EPA TOXICOLOGIST", ADVISED THE FIRE FIGHTERS THAT MEDICAL EXAMS WERE NOT REQUIRED AND THAT PROTECTIVE CLOTHING AND EQUIPMENT CONTAMINATED WITH PCB-

CONTAINING WASTE OIL COULD BE DECONTAMINATED BY NORMAL WASHING. DISCUSSIONS BETWEEN THE IAFF STAFF AND REPRESENTATIVES FROM EPA'S EMERGENCY RESPONSE OPERATIONS STAFF EVENTUALLY RESOLVED THE SITUATION BY ORDERING MEDICAL EXAMINATIONS AND REPLACING THE CONTAMINATED CLOTHING. THE LDI INCIDENT ILLUSTRATES A VERY SERIOUS PROBLEM. FIRE FIGHTERS WHO RESPOND TO HAZARDOUS MATERIALS INCIDENTS ARE TRAINED TO RESCUE PERSONNEL AND EXTINGUISH FIRES. THEY AND OTHER MUNICIPAL AND LOCAL OFFICIALS, INCLUDING PHYSICIANS, ARE NOT TRAINED TO EVALUATE TOXIC EXPOSURE AND CONTAMINATION. THUS, FIRE FIGHTERS ARE FORCED TO RELY ON THE ADVICE OF EPA PERSONNEL AND CONTRACTORS AT THE EMERGENCY SITES FOR IMMEDIATE DIRECTION. AS WE NOTED, THE INFORMATION AFFORDED IS NOT ALWAYS CORRECT.

AS A RESULT, EPA IS IN THE PROCESS OF ESTABLISHING STANDARD OPERATING PROCEDURES FOR FIRE FIGHTERS RESPONDING TO INCIDENTS AT SUPERFUND SITES. THE PROCEDURES WILL PROVIDE FOR DECONTAMINATION (OR REPLACEMENT IF IT IS MORE COST-EFFECTIVE) OF FIRE FIGHTERS EQUIPMENT. EPA IS ALSO WORKING OUT A COOPERATIVE AGREEMENT WITH NIOSH TO PROVIDE MEDICAL EXAMS FOR FIRE FIGHTERS. WHILE WE ARE PLEASED WITH EPA'S RESPONSIVENESS TO FIRE FIGHTERS RESPONDING TO EMERGENCIES AT SUPERFUND SITES, THERE ARE MANY OTHER TIMES THAT FIRE FIGHTERS MUST CONFRONT SIMILAR SITUATIONS WITHOUT THE RECOURSE OF ASSISTANCE FROM SUPERFUND.

FOR EXAMPLE, THE IAFF WORKED WITH NIOSH FOLLOWING AN EXPLOSION AND FIRE WHICH DEMOLISHED THE BERN COLOR COMPANY IN POUGHKEEPSIE, NEW YORK IN JANUARY, 1984. NIOSH ANALYZED THE PROTECTIVE CLOTHING WORN BY THE FIRE FIGHTERS IN EXTINGUISHING THE BLAZE AT THE PLANT WHICH STORED LARGE NUMBERS OF CHEMICALS IN ORDER TO MANUFACTURE DYES. NIOSH FOUND THAT MANY OF THE PROTECTIVE GARMENTS THEY ANALYZED WERE PERFORATED BY ACID BURNS AND WERE CONTAMINATED WITH THE CHEMICALS STORED IN THE PLANT. NIOSH ESTIMATED THAT IT WOULD BE MORE EXPENSIVE TO DECONTAMINATE THE PROTECTIVE CLOTHING THAN PURCHASE NEW CLOTHING.

IN TOO MANY INSTANCES, FIRE FIGHTERS ARE SIMPLY UNAWARE THAT THE PROTECTIVE CLOTHING THEY ARE WEARING IS EVEN CONTAMINATED. IN OTHER CASES, MUNICIPALITIES CAN NOT AFFORD TO REPLACE THE CONTAMINATED CLOTHING. IT IS NOT INCONCEIVABLE THAT WHEN TRYING TO CLEAN THE PROTECTIVE CLOTHING THROUGH NORMAL WASHING WITH SOAP AND WATER, THE STATION UNIFORM THE FIRE FIGHTER IS WEARING CAN BECOME CONTAMINATED. THIS VERY SAME STATION UNIFORM THAT IS TAKEN HOME AND PLACED IN THE WASHING MACHINE WITH THE REST OF THE FIRE FIGHTER FAMILY'S CLOTHING.

ANOTHER PROBLEM IS THE TOXIC NATURE OF COMBUSTION BYPRODUCTS. FOR EXAMPLE, THERE HAVE BEEN SEVERAL FIRES INVOLVING POLYCHLORINATED BIPHENYLS (PCBs) IN SAN FRANCISCO, CALIFORNIA, JACKSONVILLE, FLORIDA AND MADISON, OHIO IN WHICH THE IAFF AND

NIOSH HAVE INITIATED ACTION TO EVALUATE THE HEALTH HAZARDS POSED TO FIRE FIGHTERS. THE DOCUMENTATION RESULTING FROM THESE FIRES AND OTHER INCIDENTS RAISE AN INTERESTING PROBLEM THAT HAS NOT BEEN ADEQUATELY ADDRESSED. THAT IS, AT HIGH TEMPERATURE, PCBs FORM OTHER EXTREMELY HAZARDOUS SUBSTANCES SUCH AS 2,3,7,8 TETRA-CHLORODIOXINS AND 2,3,7,8 TETRA-CHLORODIBENZOFURANS.

UNFORTUNATELY, WE ARE UNAWARE OF THE COMBUSTION BYPRODUCTS OF THE MAJORITY OF THE OTHER MATERIALS ENTERING THE MARKETPLACE EVERY HOUR AT AN ASTOUNDING RATE. IN SOME CASES, THE BURNING OF A WHAT IS ASSUMED TO BE A MATERIAL WITH LITTLE OR NO HEALTH HAZARD, MAY BE CREATING A NEW AND EXTREMELY TOXIC SUBSTANCE.

THE RESULTS ARE SEEN IN THE NUMBER OF DEATHS, INJURIES AND ILLNESSES REPORTED IN THE FIRE FIGHTING PROFESSION. THE COSTS OF MEDICAL CARE, WORKER'S COMPENSATION AND DISABILITY PAYMENTS MUST BE PAID BY THE TAXPAYER. INDEED, I'M AFRAID THE SITUATION MAY ONLY WORSEN, SINCE MODERN TECHNOLOGY HAS PROVEN CAPABLE OF PRODUCING NEW SUBSTANCES FASTER THAN SCIENCE CAN DETERMINE THEIR TOXIC EFFECTS.

HAZARDOUS MATERIALS INCIDENTS PRESENT FIRE FIGHTERS WITH A WIDE VARIETY OF HAZARDS MARKEDLY DIFFERENT FROM THOSE ENCOUNTERED AT A STRUCTURAL FIRE. EXPOSURE TO MANY HAZARDOUS MATERIALS

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REQUIRES THE USE OF SPECIALIZED PROTECTIVE CLOTHING, HOWEVER, FIRE FIGHTERS ARE USUALLY RESPONDING IN CLOTHING DESIGNED FOR STRUCTURAL FIRE FIGHTING. IN ADDITION, HAZARDOUS MATERIALS EMERGENCIES MAY INVOLVE SEVERAL DIFFERENT CHEMICALS IN UNKNOWN CONCENTRATIONS. WHILE THE EFFECTS OF EXPOSURE TO A SINGLE SUBSTANCE MAY BE WELL DOCUMENTED, EXPOSURE TO SEVERAL DIFFERENT CHEMICALS SIMULTANTEOUSLY MAY RESULT IN ADDITIVE, ANTAGONISITIC (A MIXTURE OF TWO OR MORE MATERIALS THAT COUNTERACTS OR NEUTRALIZES THE EFFECTS OF EACH MATERIAL INDIVIDUALLY) OR SYNERGISTIC (THE ACTION OF TWO OR MORE MATERIALS TO ACHIEVE AN EFFECT OF WHICH EACH IS INDIVIDUALLY INCAPABLE) EFFECTS ON PROTECTIVE CLOTHING.

IN ADDITION, FIRE FIGHTERS ARE FREQUENTLY INADEQUATELY TREATED IN HOSPITAL EMERGENCY ROOMS BECAUSE OF LACK OF KNOWLEDGE OF THE TYPE OF TOXIC SUBSTANCES THEY HAVE BEEN EXPOSED TO. OBVIOUSLY, KNOWING THE TYPE OF TOXIC OR HAZARDOUS SUBSTANCE CAN NOT ONLY AVOID A FIRE FIGHTER ENTERING AN ENVIRONMENT WITHOUT PROPER PROTECTIVE CLOTHING AND EQUIPMENT, BUT POSSIBLY SAVE HIS LIFE IF HE WAS EXPOSED TO TOXIC MATERIALS THROUGH PROPER MEDICAL EXAMINATION AND CARE.

THESE INCIDENTS POINT OUT THE NEED FOR EXTENSIVE RESEARCH TO BE PERFORMED IN THE AREA OF DEVELOPING CHEMICAL PROTECTIVE CLOTHING, DECONTAMINATION PROCEDURES, COMBUSTION BYPRODUCTS,

AND ACUTE AND CHRONIC MEDICAL SURVEILLANCE PROGRAMS FOR FIRE FIGHTERS.

WE WOULD LIKE TO CONCLUDE BY EXPRESSING OUR CONCERN OVER THE BUREAUCRATIC INFIGHTING THAT HAS DELAYED RESEARCH FROM BEING CONDUCTED. AS IS APPARENT FROM THE PRECEEDING EXAMPLES, THE WORK OF NIOSH HAS BEEN INVALUABLE TO THE FIRE SERVICE IN IDENTIFYING OCCUPATIONAL HEALTH HAZARDS. BASED ON OUR EXPERIENCE, WE BELIEVE THAT THE DEPARTMENT OF HEALTH AND HUMAN SERVICES SHOULD BE PROVIDED WITH A DIRECT LINE ITEM AUTHORIZATION AND APPROPRIATION TO RECEIVE FUNDS TO CONDUCT SUPERFUND SPONSORED RESEARCH.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

RECEIVED
DEC 07 1983
INT'L ASSOC. OF FIRE FIGHTERS

DEC 2 1983

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. John A. Gannon
President
International Association of Fire Fighters
1750 New York Avenue, N.W.
Washington, D. C. 20006

Dear Mr. Gannon:

This is in response to your letter of October 25, 1983, to Mr. William D. Ruckelshaus, Administrator, Environmental Protection Agency (EPA), regarding medical examinations for fire fighters exposed to hazardous materials and decontamination or replacement of their equipment. In your letter you cite examples of how fire fighters have been treated differently at separate incidents, and urge that we adopt a consistent policy to cover incidents at which fire fighters respond.

I have reviewed the issues raised in your letter with my staff and the Centers for Disease Control (CDC) and I agree that standard operating procedures should be established to address these issues. I plan to initiate development of these procedures immediately. Although the details remain to be worked out, the procedures will provide for decontamination (or replacement if it is more cost-effective) of fire fighters equipment. This policy will be applicable to equipment contaminated responding to incidents funded under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

The EPA staff has had some preliminary discussions with the CDC staff regarding medical exams for fire fighters responding to incidents. I have been informed that CDC and the National Institutes of Occupational Safety and Health (NIOSH) are developing an implementation protocol for these studies. Once a protocol is developed, it will be submitted to EPA for funding considerations. I also understand that NIOSH has been discussing this issue with the International Association of Fire Fighters in order to ensure that your needs are considered in the development of the health studies protocol.

I hope this information will be of assistance to you. Mr. Kenneth E. Biglane will represent EPA at your meeting in Toronto in December and will be able to further discuss these issues with you.

Sincerely yours,

Lee M. Thomas
Assistant Administrator

Alliance

Washington Office

Headquarters Office
1501 Woodfield Road, Suite 400 West
Schaumburg, Illinois 60195-4980

Alliance of American Insurers
1110 Vermont Avenue, N.W.
Washington, D.C. 20005
202-822-8811

APR 25 1984

April 23, 1984

The Honorable Robert T. Stafford
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D. C. 20510

Dear Chairman Stafford:

The Alliance of American Insurers is a national trade association of more than 174 companies which write property and casualty insurance in the 50 states of the union and the District of Columbia.

We have been closely following the progress of the Committee's deliberations on the Superfund issue, and are extremely interested in the financial responsibility requirements currently being considered in both the House and the Senate.

The Alliance would like to submit the attached statement in the hearing record which reflects our views on this important issue.

Thank you for your consideration in this matter.

Sincerely,

Sally Ann Kirkpatrick

Sally Ann Kirkpatrick
Government Affairs Representative

SAK:lbd
Attachment

cc: The Honorable Jennings Randolph

Statement

of the Alliance of American Insurers

Before the Senate Committee on Environment and Public Works

on Superfund

The Alliance of American Insurers is a national trade association of more than 174 companies which write property and casualty insurance in the 50 states of the union and the District of Columbia.

We appreciate the opportunity to present our views on the Superfund issue which is the focus of the Committee. We share the concern of this Committee and others as to the serious nature of the issue, particularly those aspects which could affect the ability of insurers to properly serve their policyholders and insurance consumers.

With the establishment of the Federal Resource Conservation and Recovery Act of 1976 (RCRA), the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Motor Carrier Act of 1980, the insurance industry was called upon to fulfill financial responsibility requirements for industries affected by these acts. In response to this call, the Alliance has worked closely with the United States Environmental Protection Agency in developing liability insurance standards for hazardous waste treatment, disposal and storage facilities. As a result, liability insurance requirements have been established which are not only fair and equitable to business and industry but also provide the necessary protection for the public.

The Alliance plans to continue to work with government and the private sector in attempting to address the very complex problems posed for society by hazardous wastes and toxic substances which are the byproducts of our industrial economy. Like the members of this Committee and others in both the public and private sectors, the Alliance and its members are endeavoring to identify and understand the various complex problems having an impact on the environment and the public as a result of the generating, transporting, storage and disposal of hazardous wastes and toxic substances. As part of this effort, we are making a particular effort to explore what appropriate role insurers should play in this area.

The insurance industry is already being asked to underwrite and provide coverages for:

- Products having the potential for causing damage to the environment in the future;
- Companies that manufacture such products;
- Physical structures where such products are manufactured;
- Transportation systems and mechanisms used to move such products; and
- Systems and mechanisms to store and dispose of such products.

In addition, insurers will be asked to defend their policyholders in all types of litigation which may develop. Virtually every aspect of the property and casualty insurance business could be potentially affected by the reaction and response of society to its mounting environmental concerns.

Almost all of those sharing these concerns are aware of the magnitude of the issues involved. However, it is important that all interested parties appreciate the limitations and characteristics of the various mechanisms under consideration or proposed to address these concerns. This will be necessary for an informed dialogue which can lead to a solution that is equitable and workable for both the present and the future.

Specifically, the Alliance is concerned by continuing proposals in both state and federal legislation that suggest a misunderstanding of the appropriate role of insurance. That role must be consistent with its capabilities. We are concerned, for example, that there are expectations that the insurance industry can and should be used to police other industries and "weed out" particular businesses which are viewed by some as "undesirable."

In certain proposals, there is an assumption that insurers can adequately inspect businesses which must meet extraordinarily high financial responsibility requirements and price their insurance coverages to force high risk entities out of business. Such proposals operate on the mistaken assumption that insurance companies have sufficient expertise to conduct the type of evaluation which would be necessary to select out hazardous substances producers, transporters and storers which are undesirable risks to society. Unfortunately, where insurance of financial responsibility has been mandated, regulatory and legislative pressures grow to the point where the insurance industry is compelled to provide a market for these so-called "undesirables" at prices within their capabilities -- even if all the other policyholders must subsidize them.

The Alliance and its members believe that the role of policeman is appropriately and more effectively assumed by government. Only government has the power to order a correction, a cleanup (the imposition of penalties) or the taking of property or other safety precautions. Proposals to mandate financial responsibility to force hazardous waste cleanup or eliminate unidentifiable entities out of business ignore how insurance operates in the real world.

Some legislative proposals in the environmental field also ignore two important characteristics and limitations of the insurance mechanism: its ability to price and its financial capacity to provide insurance protection.

Insurance is a risk-sharing device by which the losses of a few are spread over a large number of policyholders. To be a risk bearer as well as provide a risk-sharing mechanism, the insurer must be able to gather sufficient information to reasonably predict the number and type of losses which are expected to occur and what the cost for them will be so that a price for the insurance product can be established which will result in a spread of risk among many. It simply is not prudent for an insurer to assume potentially unlimited liability which, by definition, cannot be priced. Where the liability is not predictable because the insurer is being asked to assume liability for past actions of policyholders which are unknown to the insurer and probably are unknowable, it becomes impossible to determine with any accuracy what losses can be expected and what prices to demand. Where new coverages are exacted, there also may not be sufficient experience to accurately

estimate expected losses, particularly in those areas where the event generating liability occurs infrequently. When all these various unknown factors are present, it simply becomes impossible to price, and therefore provide, the product.

Another limiting characteristic of the insurance mechanism is the financial capacity of insurers to provide coverage. Insurers over any extended period of time cannot have losses and expenses that are in excess of the premiums collected and other income. It would be imprudent management and unfair to other policyholders if a company were to assume obligations which potentially could deplete the company's surplus. Unlimited liability certainly represents such potential.

The Alliance and its members are concerned that environmental legislative proposals which require unlimited liability coverage and retroactive applicability and which do not consider the needs of the system for statistical validity and responsible pricing are not insurance at all.

Insurers can insure what is insurable, but they cannot in and of themselves fund programs for victim compensation and environmental cleanup that are essentially social programs. Traditionally, such programs have been the function of government and general taxation. Whenever such programs are considered, there are mechanisms other than insurance which may be more appropriate funding devices. Even then, the limitation on public resources and the need to balance equities should be faced by their proponents.

The insurance industry believes that legislative initiatives should first address the scope of the problem. Adequate scientific and statistical evidence has not yet been produced to demonstrate the need for comprehensive legislative programs. We understand that a number of studies are underway to find the answer.

Furthermore, we believe there is a lack of evidence which objectively demonstrates that existing reparation mechanisms have failed to compensate properly those who have suffered legitimate injury. Moreover, there is little information about whether any of the problems in question are of a temporary nature during the period the reparation mechanisms adjust to new responsibilities or whether a more fundamental problem is involved. We believe it is in the best interests of society at large for a solution fairly and equitably addressing the needs of all involved in light of a demonstration of need for legislative action.

With respect to Superfund legislative proposals, we oppose the apparent retroactive liability required and the application of joint and several liability that many of the bills contain. When coupled with the application of strict liability, also provided in many proposals, retroactivity and joint and several liability make each individual party responsible for the acts of all parties who might ever have contributed to the environmental damage or injury. The combination of concepts creates an almost unlimited exposure which practically may be uninsurable.

The Alliance opposes the adoption of a strict liability system in which the injured party has no responsibility to prove the fault of the defendant. Because several proposals broadly apply this theory of strict liability to all parties who had any connection with a hazardous substance, we strongly oppose this expansion of the traditional strict liability theory. For example, the application of joint and several liability in an action for damages would make any party with any percentage of fault subject to the liability of any other user of a disposal site. Thus, a party with an entirely safe operation, but which happened to dispose of hazardous wastes in a disposal site which was also used by a negligent party, would be subject to liability.

The Alliance also strongly opposes the inequitable concept of joint and several liability in lieu of a system of several liability. We believe each party should be responsible only for the damages attributable to its own actions. The joint and several liability system imposes unnecessary legal and insurance costs on relatively innocent parties. Such a system substantially contributes to the increase in the cost of products and services provided by business. Under joint and several liability insurers would be forced to price their product on the performance of most of the hazardous waste industry, not on the performance of the insured.

We are opposed to the imposition of retroactive liability because it means that an insurer cannot receive an adequate premium for the coverage. Insurers must be able to reasonably predict losses and expenses to establish the premium for the insurance. There is no method to go back to the policyholder to collect for new exposures created by retroactive liability or the creation of new forms of liability on old coverages. We strongly support

language which would clarify that expanded liability only apply prospectively.

In addition to the expanded liability concepts included in proposed legislation, our members have expressed concern about provisions in several legislative proposlas for the enactment of statutory presumptions that are unsupported by scientific evidence. Such presumptions eliminate the basic causation requirements necessary for the establishment of a relationship between the act or omission of the defendant and the injury or damage to the environment or the victim. The elimination of the causation requirement thus could create a system where anyone with a disease could automatically recover for their injuries. Our members are concerned that capacity for such a system does not exist in the insurance industry and that enactment of any presumption is premature, given the lack of information on the number of people who actually have been injured by exposure to toxic substances.

Conclusion

The Alliance shares the concerns of this Committee and of society in general over the potential problems. However, our members at this time believe that the passage of legislation on this issue is premature, as discussion bills contain provisions which are both uninsurable and unaffordable.

Meanwhile, the Alliance will continue to work with others about the proper role for insurance in this issue. Whatever the actual scope of the issue may be, and its dimension is yet to be defined, there can be a proper role for insurance in the solution. But that role cannot, of itself, be the solution.

April 25, 1984

TESTIMONY

submitted by

THE AMERICAN CANCER SOCIETY

before

THE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
UNITED STATE SENATE

"Health Effects of Toxic Chemicals"
Reauthorization of the Superfund
May 24, 1984

For further information, contact:
Alan C. Davis
The American Cancer Society
777 Third Avenue
New York, NY 10017
(212) 371-2900

TESTIMONY OF THE AMERICAN CANCER SOCIETY

The American Cancer Society, the world's largest voluntary health agency with over 2.5 million active volunteers is pleased to have the opportunity to submit testimony regarding the Comprehensive Hazardous Substance Clean-up and Emergency Relief Act, better known as Superfund.

On February 10, 1984, the Board of Directors of the American Cancer Society passed a resolution addressing the issue of Superfund. In part that resolution states:

> The American Cancer Society urges the Congress to approve legislation that will either extend the funding of the Superfund program or establish programs of equal or greater effectivess, in order to continue efforts to identify and clean up waste sites that are designated as hazardous to health and the environment.

The remainder of that resolution is attached to this statement.

It must be pointed out at the outset, that the American Cancer Society has not taken a position on every specific detail of Superfund legislation. As an organization, the ACS prefers to give general and conceptual support.

The American Cancer Society is best known as a cancer research organization and this year the Society will, in fact, spend $68-plus million on cancer research. What is not so well known is that the American Cancer Society spends only slightly less -- approximately $50 million -- on public and professional education. When it comes to educating the public and, more importantly in this instance, educating physicians, as to the hazards of toxic waste: what signs of disease they should be looking for

in their patients, what to tell their patients about precautions, even what kinds of cancer exposure to these wastes cause and when we can expect them to show themselves, in other words, what the latency periods are, we are at an almost total loss. It is in the words of Dr. Irving Selikoff, reknowned environmental carcinogenisis specialist and ACS board member, a "scientific morass." We know that there are such chemicals as benzene and vinyly chloride in hazardous waste sites.

We know that these chemicals individually cause cancer in humans. What we don't know is precisely what other chemicals are in these sites; whether they, too, cause cancer in humans; whether they act synergistically with the known human carcinogens; what the latency period is for any potential cancers or even what the many potential cancer sites and types caused by exposure to these substances might be. The list of unanswered questions is long and frightening.

The American Cancer Society is moving as an organization to try and answer some of these questions. The Society feels a strong obligation to do so. It is currently conducting Cancer Prevention Study II, a one-million-plus person, six-year, epidemiological study which has been designed mainly to determine the impact of environmental substances on cancer mortality rate. The first Cancer Prevention Study conducted in the 1950's was largely responsible for bringing to light the dangers of smoking and asbestos exposure, among others. Cancer Prevention Study II will, we hope, provide some answers with regard to the dangers of the toxic substances being disposed of at solid waste sites. We are

now looking at the feasibility of taking drinking water samples from the homes of a statistically representative sample of participants in CPS II to track the effect various chemicals and the drinking water may have on cancer mortality. This information should be very useful to the scientific community in determining at least some of the health effects of exposure to some of the chemicals that our citizens now ingest every day. However, Cancer Prevention Study II will not provide all of the answers. We hope that other studies will add substantially to the critically needed data base.

The Woburn Study conducted by Dr. Stephen Lagakos, Dr. Marvin Zelen and Barbara Wessen, best points out the problems presented by our present lack of information. In this extremely important study, Dr. Lagakos and his colleagues have found a significant incidence of childhood leukemia among children clustered around the Woburn site. Such clusters are of interest, and childhood leukemia is indeed a compelling and tragic human problem. However, let us look at what we do not know about the Woburn site. Let us look at the frustratingly long list of questions still remaining. If in fact the chemicals found in the water in wells G and H are responsible for the greater incidence of childhood leukemia, what else might happen to the people around that site ten, fifteen or even twenty-five years from now? Might we, for instance, see an increase in colon-rectal or lung cancer? To illustrate the long latency period of some cancers, we know the current increase in the incidence of lung cancer among women was caused by an increase in

the smoking rate of 25 to 30 years ago -- not five years ago or last year -- but 25 to 30 years ago.

What precise chemicals are the cause of the higher childhood leukemia incidence and in what quantities must they be ingested by the child or pregnant woman to increase statistically the risk of childhood leukemia? What other sites might have similar chemicals that will increase the cancer risks for citizens living around them?

If one accepts the chemicals in the water in Woburn wells G and H are responsible for the increase in childhood leukemia, the implications of the unanswered questions still far exceed the implications of the one answered question. The full answers must be found if we are to be able to anticipate and to treat those affected by hazardous substances and improperly disposed of at waste sites and relatively dense population areas.

There are those who say that Superfund is a solution in search of a problem. The American Cancer Society has always been scientifically responsible in statements about proven carcinogens. The Society does not believe it would properly serve the American public who look to it for guidance if it sensationalizes potential carcinogens. The American Cancer Society does not believe it fulfills its function as an organizationa dedicated to providing cancer services and information in conducting cancer research, as an organization respected in the community, if it joins the "Carcinogen-of-the-Month Club." Therefore, the Society does not go on record saying that every site with hazardous substances in it is

going to cause untold cancer deaths. This cannot even be said as yet of the Woburn site.

We submit this statement to emphasize that while we do not know the whole story about what will happen, we do know that we are dealing with at least some known human carcinogens and even one entering our water supply or the air we breathe is one too many.

We learned that sorry lesson with asbestos. We do not need to learn it again with other carcinogens. The American Cancer Society therefore believes that the information we do have about hazardous waste is sufficient to cause concern and to support efforts aimed at correcting this problem.

The American Cancer Society believes that the identification by the Environmental Protection Agency of 16,400 hazardous waste sites in the United States and the estimation of the EPA that there may be a total of 22,000 or more documents a problem of significant magnitude. Certainly our information about some of the carcinogenic chemicals in those sites, such as vinyl chloride and benzene, is conclusive enough to convince us that there is a clearly evident health danger which the Superfund addresses. We therefore, urge this Congress to take a two-fold interest in this problem.

First, we must make sure for the future well-being of those whose health is at risk and for the information of those who will be charged with treating them, that we know as much about these waste sites and what chemicals are in them and what the health effects of exposure to these chemicals are as we possibly can. We must remember that it may be not the next generation of physicians,

but the generation after that who could be facing these problems of dealing with the consequences of our carelessness today.

Second, we cannot use either the need for further studies, or our lack of complete knowledge about each and every chemical to in any way delay the clean-up of these sites. We have enough information to know we have a serious health risk now, and a potentially serious cancer risk in the future. The longer we take to finish the clean-up, the harder it will be for doctors to deal with the inevitable health problems for the American people to cope with the trauma of the needless death of loved ones.

Cancer will cost our economy an excess of $25 billion this year in health care costs, in forced liquidation of assets and in lost wages. The average cost to an American family who lost one of its members to cancer in 1983 was $22,000 -- just for medical bills during the last year of life -- and most had medical bills for a much longer period. In terms of the human toll, 34% of all Americans will eventually develop cancer and 3 out of 4 American families will have someone stricken with cancer. Everyone must judge for himself what the value of that is.

The American Cancer Society strongly believes that prevention is of the utmost importance. We sincerely hope that twenty-five years hence, the Cancer Society is not submitting testimony to Congress that had we only cleaned up those toxic dump sites or never started them, some number of cancer deaths could have been prevented.

The American Cancer Society is heartened by the unanimity of its Board of Directors about the basic reauthorization of the

Superfund. The Society urges this Committee to reauthorize the Superfund and to do it quickly. The Society also urges the Administration to act equally quickly in carrying out the intent of the legislation. Such dispatch sends a message to all Americans that public officials are concerned and, having discovered these wastes, we will now insure that exposure to potentially dangerous substances will come to an end as expeditiously as possible.

STATEMENT OF

THE AMERICAN GAS ASSOCIATION

BEFORE THE

SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

ON THE REAUTHORIZATION OF

THE COMPREHENSIVE ENVIRONMENTAL RESPONSE

COMPENSATION AND LIABILITY ACT OF 1980

May 23, 1984

Mr. Chairman and Members of the Committee:

The American Gas Association (A.G.A.) is a national trade association composed of nearly 300 natural gas distribution and transmission companies. Together, these companies account for over 85% of the nation's gas utility sales.

The nation is becoming increasingly aware of the dangers of improper handling of hazardous substances. In response, various bills have been introduced, including S. 2421 by Senators Arlen Specter (R-PA) and John Heinz (R-PA), to reauthorize and improve Superfund. In redrafting the definitional sections, however, the authors have deleted the existing exclusion for natural gas and similar substances. Thus, natural gas, liquefied natural gas, synthetic natural gas, and natural gas liquids could be regulated as hazardous substances, pollutants, and contaminants.

When Superfund was passed in 1980, the Committee wished to cover both present and future hazardous substances; thus, it wrote broad definitions of the terms hazardous substance, pollutant, and contaminant into the Act. Because natural gases are undoubtedly flammable, they would have been regulated under

the broad definitions but for specific exclusions which the Committee added (42 U.S.C. Sections 9601(14) and 9604(a)(2)). Nothing has happened since Superfund was first passed to justify regulating natural gas in new environmental legislation. The purpose of the new legislation is to improve and extend public protection from toxic chemicals and contaminants. Yet natural gas, even if accidentally released, does not pose this type of threat.

Natural Gas and Its Components Are Not Contaminants

The principal components of natural gas are nontoxic, nonirritating, and not naturally reactive with other chemicals. Since natural gas is lighter than air, it does not permanently "mix" in the soil; thus, there are no environmental cleanup problems from natural gas residues. Furthermore, natural gas is virtually insoluble in water. It does not bioaccumulate and, in fact, is widespread in nature. Although natural gas is certainly flammable,* it is not mutagenic or carcinogenic. Indeed, some people produce methane -- the principal constituent of natural gas -- in their bodies.

Natural Gas Liquids Are Not Contaminants

There has been a lot of confusion about natural gas liquids. This arises because some "gas liquids" are not really

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* Natural gas is only flammable in gas-to-air mixtures of 5 to 15 percent. Combustion can only occur in this narrow range; mixtures leaner than 5% gas-to-air or richer than 15% gas-to-air are not flammable.

liquids at all at normal atmospheric temperature and pressure. Ethane, protane and butane are stored and transported as liquids because they are kept under pressure, but as soon as that pressure is released they become gases and dissipate into the atmosphere just as natural gas does. This means that, if they are stored in an underground tank that is ruptured (perhaps by a construction crew overhead), they will not "puddle out" into the soil and contaminate it. Instead, ethane, propane and butane will gasify, leaving no liquid residue. These substances are not very chemically reactive and are also virtually insoluble in water. Like natural gas, any hazard is due to flammability -- not long-lived toxicity.

There are other gas liquids, however, that remain liquids at standard temperature and pressure. These liquids are a small percentage of the huge volume of natural gas moving through the distribution and pipeline system. Because liquids can damage compressors designed to handle gas only, they are collected and removed at various points, called "drips", along the nation's one million miles of gas pipeline. Both the public and the environment are, however, protected from incidental contamination from these liquids. As an integral part of the pipeline system, drips are covered by the same set of pervasive Department of Transportation regulations that cover every other phase of the gas delivery system.

The Department of Transportation Already Has Extensive Safety Standards for the Gas Industry

Historically, the gas industry has had an exemplary safety record. Furthermore, the Natural Gas Pipeline Safety Act of 1968, as amended in 1976 and again in 1979, now governs virtually every phase of natural gas transportation, including liquefied natural gas, gas liquids, and drips. DOT regulates design, siting, installation, inspection, emergency plans and procedures, testing, construction, expansion, operation, replacement, and maintenance of pipelines. For example, 49 C.F.R. Part 192 sets out detailed specifications for every aspect of pipeline design -- including the tensile strength of the steel, taps, valves, welds, meters, and compressors. Operators are required to test lines under pressure. Gas lines must be patrolled and inspected for leaks. DOT regulations require repair and reporting of leaks; if necessary, DOT may issue compliance orders to pipeline operators. Failure to comply with an enforcement order can lead to significant civil penalties ($1,000 per day per violation up to $200,000) and, in some cases, to criminal penalties ($25,000 and/or five years' imprisonment).

As an integral part of the pipeline system, drips are also covered by DOT regulations. This means that a drip point fabricated from 30-inch diameter pipe must be made of pipeline quality steel, coated to prevent corrosion, and designed to withstand very high operating pressures: for example, 1500 p.s.i. (pounds per square inch) -- compared with normal atmospheric pressure of 15 p.s.i. Furthermore, they have the

same electronic devices to prevent corrosion as the pipeline system; these devices are known as cathodic protection. Leaks from drips would be apparent to the pipeline inspector and the operator would have to record them.

Although the term "drip" implies that the operator is collecting a waste product, these gas liquids can be even more valuable than natural gas itself. The liquids are periodically collected and sold to refiners. Even the collection and transportation of these liquids is DOT-regulated under the Hazardous Materials Transportation Act of 1974, as amended (49 U.S.C. Section 1801). Thus, EPA regulations for the literally thousands upon thousands of pipeline drip points would be unnecessary and redundant.

New Superfund regulations for drip points would be a great burden on both EPA and the industry, but would provide no countervailing benefits. The number of drips varies from system to system; one company reports that it has several thousand drip points, while another has 5,000 - 6,000 points. The total amount of liquid in any drip does not exceed 1 or 2 barrels (1 barrel = 42 gallons). Usually there would be much less liquid collected. It makes no sense to require another federal agency -- in this case EPA -- to duplicate the work of the Department of Transportation, especially when DOT regulations are in place and working well.

Summary

One of the primary purposes of Superfund is to allow EPA and/or state agencies to step in and clean up or police hazardous waste sites, but that authority is unnecessary for natural gas facilities. A.G.A. has been, and continues to be, a strong supporter of the federal pipeline safety program in the Department of Transportation. DOT, with its in-place regulations and inspection system, can do a better job, faster. If there is a need, DOT can respond immediately. We do not need two federal agencies on the scene when one already suffices.

Furthermore, natural gas and its components are not hazardous substances. They do not mix readily with soil or water. If released, they dissipate into the atmosphere. They are widespread in nature and in society. They do not bioaccumulate, nor are they mutagenic or carcinogenic. Thus, this Committee can safely conclude -- as it did in 1980, when Superfund was first passed -- that natural gas, LNG, SNG, and natural gas liquids are not hazardous substances, pollutants, or contaminants. We urge this Committee, in its upcoming consideration of Superfund, to retain the definitional exclusions for natural gas, liquefied and synthetic natural gas, natural gas liquids, and mixtures thereof.

6/1/84

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

MONDAY, JUNE 25, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 10:12 a.m., in room SD-406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford, Simpson, Domenici, Evans, Randolph, Mitchell, and Lautenberg.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Good morning, and welcome to the continuing saga of whether we will extend Superfund this year. I hope this will be the last of this year's committee hearings on the subject of revising and extending Superfund.

With my assent and that of my good friend and colleague, Senator Randolph, the staff has prepared a set of possible amendments to Superfund. These are publicly available and were distributed last week, together with an explanation.

These amendments do not necessarily reflect my views or those of Senator Randolph. Indeed, they were not prepared to reflect the views of any individual member or small group of members; instead, they are an enumeration of issues combined with suggestions which might be the basis for developing a set of amendments which a broad range of Senators can support.

The suggested amendments do not contain provisions directly related to an administrative program of victim compensation. I would expect that those who are proponents of such a program will develop a proposal and circulate it. Nor does the package contain amendments relating to the size of the fund or the nature and rate of the tax which sustains it. Again, I hope that suggestions on those issues can be collected and circulated later this week.

The tax which sustains the Superfund Program does not expire until September 1985. It is already apparent, however, that the amount of money flowing into the Superfund is much too small. For a variety of reasons, the Superfund Program got off to a slow

start. It is now off and running and could easily spend in 1 year the amount which the Congress has made available for 5 years.

By enacting the Superfund, the Congress raised the hopes and expectations of millions of Americans. I believed in 1980 that $1.6 billion was too little money for the task at hand, but others in good conscience disagreed. If you will recall, the original bill in 1980 was for $4.2 billion and the $1.6 billion was the necessary, it turned out, compromise to get the bill through the Congress and signed by the President.

The case has been proven at this point that if the Superfund is to do the job, we must act as quickly as possible to increase its size and eliminate obstacles. With that in mind, it is my hope that the committee can begin mark up during the week of July 23, with the goal of completing committee work before the August recess.

Our only witness this morning is Mr. Lee Thomas, who is the Assistant Administrator for the Environmental Protection Agency's Office of Solid Waste and Emergency Response. It's my understanding that Mr. Thomas does not have prepared testimony, but is available to answer questions which the members may have.

In the interests of time I would suggest that as soon as other members have completed their opening statements that we proceed directly to the questioning of Mr. Thomas.

Opening statements at the moment don't appear to be a serious problem since only Senator Lautenberg and I are here. The Chair recognizes the difficulty of scheduling a matter for a Monday morning, but we felt we had to in order to get this officially in front of the public and the committee on a timely basis.

Senator Lautenberg.

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Thank you, Mr. Chairman. It pleases me to be here on this Monday morning as part of this very important issue. I welcome Mr. Thomas here today; I appreciated his testimony in April and I welcome him back. As usual, Mr. Chairman, I am looking forward to working with you and all the members of the committee on a Superfund law that will expand our program to protect the public and the environment from the dangers of abandoned waste sites.

Mr. Chairman, you've thoroughly examined these issues by hearings here as well as in my home State of New Jersey, and we've heard testimony from witnesses who have experienced exposure to toxic waste sites and contaminated water supplies. This is an appropriate continuation to those hearings and hopefully toward a solution of some to these problems.

By the end of the summer Mr. Thomas may be adding the 100th Superfund site to New Jersey's long list of sites. This fact alone underscores how critical reauthorization is to my State and many other States with sites awaiting action. Our work this month and next, and the recent progress in the House, makes reauthorization this year increasingly likely.

I thank you again, Mr. Chairman, for your important commitment to this objective.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

We will keep the record open at this point for any opening statements that members may wish to make. We expect several other Senators will be coming—I see one right now.

Senator Evans, Senator Lautenberg, and I have made brief opening statements in connection with the consideration of various suggestions for amendments to Superfund. If you have one, this will be an appropriate time.

Senator EVANS. I think I will wait and listen and do it through the questions and answers.

Senator STAFFORD. All right. In that case, we'll turn to Lee Thomas.

Lee, since you know this committee pretty well and we know you, I would invite you to make any off the cuff statements you may wish, or formal statement, or any comments you wish with respect to the various suggestions that have been put together by the committee.

STATEMENT OF LEE THOMAS, ASSISTANT ADMINISTRATOR, OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE, ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY GENE LUCERO, DIRECTOR, OFFICE OF WASTE PROGRAMS ENFORCEMENT, AND BILL HEDEMAN, DIRECTOR, SUPERFUND PROGRAM OFFICE

Mr. THOMAS. Thank you, Senator. I appreciate the opportunity to come back and discuss with the committee today the Superfund reauthorization language, and would just make a couple of comments.

First I would like to introduce Gene Lucero, who is Director of my Technical Enforcement Office for the Superfund Program and Bill Hedeman, who is Director of the Superfund Program Office in my part of the Agency.

Senator STAFFORD. Could you spell their last names?

Mr. THOMAS. L-u-c-e-r-o, Gene Lucero.

Senator STAFFORD. L-u-c-e-r-o.

Mr. THOMAS. Hedeman, H-e-d-e-m-a-n, Bill Hedeman.

Senator STAFFORD. Thank you.

Mr. THOMAS. We will attempt today to respond to questions that members of the committee have concerning proposals that you're looking at to put weight into the reauthorization of Superfund. I'd make just a couple of comments.

One, we had an opportunity to take a look at the proposed language over the weekend. We also had an opportunity on Thursday of last week to discuss with committee staff some of the language and they were responsive in clearing up some of the questions that we have. But we certainly have a continuing review underway of many of the provisions.

In that regard I would mention a couple of things. Overall, as I indicated last time, the administration is very strongly committed to reauthorization of the Superfund statute. We feel that there's no question that the program should be reauthorized and no question that it's going to require more funds than are available now to complete this job. It's an objective that I think we jointly share.

We have underway the 301 Studies, and I would provide to the committee today if you would like, an outline of the 301 Studies, which are the studies that Congress asked us to do when you authorized Superfund 3 years ago, to provide to you information that you would use in considering reauthorization of the act.

Senator STAFFORD. We might interrupt to say that we would like to get that information.

Mr. THOMAS. I have it, and I'll leave it for you right now. It's an outline of each one of the studies—the first study, which is effectiveness of the response system ranging all the way down to the taxing systems experienced to date, as well as alternative taxing systems to raise revenue.

Senator STAFFORD. Thank you.

Mr. THOMAS. Thank you very much.

The first page of that includes a proposed schedule for submission of those studies to Congress. We anticipate at this time meeting October 15 date for final drafts of those studies that we can make available to the committee and other interested Members of Congress. We are anticipating submitting the report to Congress December 11, which is the date we have been shooting for for quite some time.

We think those studies are critical. The more we review the proposals that this committee is looking at, it just emphasizes our thought that it's most important that this information be available for the committee as well as for Congress to make a determination on how the program should be reauthorized. Particularly, the provisions of reauthorization.

The second point I would like to make is that as we've reviewed the proposals, I would urge the committee to give us an opportunity in the administration to present additional testimony in two areas, both of which I don't feel entirely comfortable in trying to present an analysis of today. The first are those areas dealing with health and toxicological impacts. There are a variety of provisions that the Senate, this committee, will be looking at, dealing with provision of assistance to citizens who live near toxic waste sites in the area of health effects, health assessments, as well as the provision of health care. The full implications of that I'm not completely familiar with at this point, and have asked Dr. Brandt, the Assistant Secretary of HHS, to review; we have had some preliminary discussions with him over the weekend but would urge the committee to give him an opportunity to discuss those with the committee.

The second area would be the legal implications of many of the provisions that the Senate is going to look at, particularly as they relate to new sections concerning Federal Cause of Action citizen suits and the connections between those sections and the new sections on health studies and health assessments. I would urge the committee again to give the administration an opportunity to have representatives from the Department of Justice as well as our own Agency discuss those in some more depth. The analysis of that we also have underway, but we feel in both of those areas that there are substantial implications for the program, expanding the program, modifications of existing law and modification of rules of procedure, and impact on the Federal court system that we would like to present to the committee. And I don't feel completely com-

fortable in either trying to present that or even saying that we've finished the analysis of what the implications are.

I will try today to respond to questions concerning the technical aspects of the Cleanup Program, and a number of the provisions that you will be looking at do impact on how we clean up, when we clean up, what kind of associated provisions we provide for citizens in that effort. And I'll try to respond to that.

So with those opening comments I'd be glad now, Mr. Chairman, to get into any questions that the committee would like to ask.

Senator STAFFORD. Thank you, Mr. Thomas. In just a minute I'll yield to Mr. Randolph for an opening statement if he cares to make one, but first, we note that the other body's companion committee has already passed a Superfund bill by a vote of 38 to 3, the size of the support for it surprised me. I suppose that committee has apparently been comfortable in going ahead without the information that you might have available for us by October 15. I see you're nodding your head.

Mr. THOMAS. I think they felt comfortable in doing that. I certainly urged them not to.

Senator STAFFORD. Have you had an opportunity to see the House bill?

Mr. THOMAS. Yes, sir.

Senator STAFFORD. Have you any particular comments with respect to it?

Mr. THOMAS. I have grave reservations about certain sections of it, Mr. Chairman, and feel it could have a substantial negative impact on the program.

Senator STAFFORD. Could those comments be made available to us?

Mr. THOMAS. I have not rendered those comments into writing to the House committee. I have indicated in specific examples where I think it could have implications. I'm sure a number of those examples we'll discuss this morning.

Senator STAFFORD. I see.

The date of October 15 keeps coming up. I really would urge EPA generally and you in particular to expedite that to, at the latest, September 15, if you could. That's still nearly 3 months away. October 15 obviously is going to occur so late that Congress will be campaigning instead of legislating, so I would urge you to try to complete that at the latest by September 15, and preferably by the Wednesday following Labor Day.

Finally, word has come to us that EPA has some comments with respect to a Federal cause of action or a memorandum. Is there such a memorandum?

Mr. THOMAS. Yes, sir. The Administrator asked if we would prepare an analysis of the implications of the Federal cause of action provisions that the House included, as well as those that you are considering. I don't have those completed today. I've been told that that will be completed by Wednesday. Our general counsel, Jim Barnes, has the lead within the Agency for reviewing those provisions of the bill as well as participating with the administration on an entire review of the whole victim compensation components in this area. As you know, last time we discussed that briefly when Jim was here. I regret Jim was not able to be here with me today,

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but he's given me assurance that we hope by the middle of the week that we would have a data analysis, as I think the Administrator discussed with you, completed so the committee would have that available.

Senator STAFFORD. We would appreciate it if we could have that by Wednesday.

Mr. THOMAS. We do have, as you know, major reservations concerning the provisions of Federal Cause of Action. We think it has substantial implications—not just for this program, but for a variety of programs. Many of those we've already discussed with the committee.

Senator STAFFORD. All right. Thank you very much, Mr. Thomas.

Senator Randolph, do you have an opening statement you wish to make?

Senator RANDOLPH. Mr. Chairman, I will make no opening statement; but if it's agreeable with you, I would like to ask a few questions.

Senator STAFFORD. That is agreeable, Senator Randolph. I have informally asked two or three that have occurred to me. We might go back and forth, those of us who are here.

Senator RANDOLPH. That would be very helpful, and certainly would take care of my comments.

Senator STAFFORD. All right.

Mr. Thomas has not made an opening statement either. He's made some informal comments, and the main purpose of this meeting is to allow us to address questions to him. So I would suggest to my colleagues that we limit ourselves to 5 minutes on the first round of questions, and then see how it works out.

Senator RANDOLPH. Mr. Chairman, I join you and other members of our committee welcoming to the witness table Lee Thomas. I hope it won't be misunderstood when I say that it's never a disaster when he's a witness.

But I do remember him when he was working on disaster programs. You'll remember that period.

Mr. THOMAS. Very well, Senator.

Senator RANDOLPH. Yes, sir. And we had many, many contacts with you. And so to Mr. Lucero and Mr. Hedeman and to yourself, we realize that there are witnesses who can be helpful to the committee, and the committee members wish to be helpful to you.

It's been brought to our attention, Lee, that producers of several metals, particularly aluminum—and I'm very frank, always, to speak of West Virginia; we have a very large aluminum plant by Kaiser at Ravenswood, WV. They presented a plausible case that would seem that there is very little toxicity or connection to Superfund problems in these primary metals. There are toxic compounds, they say, in these metals; they argue, however, that those compounds are produced by the chemical industry, not from primary metals.

By this argument which they advance, the feed stock tax would not be expanded to include aluminum or zinc or perhaps other metals, but would be collected on specific toxic aluminum sulfate or zinc chloride.

Now, I'm sure that you would have comment on the Superfund problems that could or would be caused by aluminum, zinc, nickel,

or other metals, and on whether the primary metals or specific compounds should be taxed.

Mr. THOMAS. Senator, I really don't have specific comment on that today. I would indicate a couple of things. One is that one of the studies that we will finish up has focused on the specific relationship between the substances we're finding at the sites, and the feed stocks under the current tax. One of the things we tried to do is look at what substances we're finding, back them up through the chain, and determine whether they're in the current feed stock tax scheme or not. So I don't know exactly the answer to the question as to whether we're finding substances that relate back to primary metals or not. I think we'll be able to provide that to you.

The second thing, I would just make an overall comment. I think one of the more difficult tasks that this committee will have to deal with, as the Finance Committee will have to deal with, will be the entire taxing mechanism for Superfund. The implications of some of the provisions of the bill are that you're going to have to provide a substantial increase in revenue in order to provide funding for these things. And I think that one of the things that we're trying to do, for instance over on the House side, is take a look at the bill that was reported out of Energy and Commerce and not only cost out the bill as far as its program-cost implications, but also project out the revenue side of the bill. I think there are going to be substantial disconnects. One of the things I would urge is that you, as you look at the provisions of your bill, take into account the substantial increases in revenue that are going to be required if you incorporate some of the provisions that you are looking at, versus what you're going to do over on the tax side.

But to the specific question, I don't have a technical answer for you today, but I will have.

Senator RANDOLPH. I appreciate your response.

I think the record must always show, that in the State that I represent, when we have industries that employ thousands of persons—Kaiser, for example, has had as many as 4,000 employees—but when they, personally, or through organizations such as the Aluminum Association of America, bring to us information, I have a responsibility not to express a support of them necessarily, but to express their concerns. I want that always understood, when I bring these questions into focus.

Now, if we are to rely in part on the waste-end tax, I frankly would prefer to focus it on those waste disposal practices that we should discourage, that we actually are determined to discourage. Clearly, that would include all hazardous substances disposed of in landfills or surface impoundments. I see no reason, however, to tax waste disposed of in underground injection wells.

Now, what is your advice, your counsel on taxing waste that goes into injection wells? Have any injection wells been evaluated for inclusion on the national priority list?

Mr. THOMAS. Senator, I'm not aware of any that have been evaluated as a part of the ranking on the national priority list. But we certainly will review that to determine whether there are any relationships there.

Senator RANDOLPH. The answer is that you have no——

Mr. THOMAS. I'm not aware of any right offhand.

Senator RANDOLPH. All right. Thank you.

Mr. Chairman, I want to comply. I've run over just a little, but I will come back later to ask one or two more questions.

Senator STAFFORD. All right. Thank you.

If it turns out that 5 minutes per member is too short, we'll change it to 10; but let's try the 5 to start with.

Senator Lautenberg.

Senator LAUTENBERG. I have to ask the chairman a housekeeping question. Is it on one's honor to observe the 5-minute time limit?

Senator STAFFORD. Well, the Chair keeps an eye on it.

Senator LAUTENBERG. OK. If the Chair will be kind enough to remind this Senator when he goes over time, it would be easier than me trying to watch the clock.

Mr. Thomas, you agree that Superfund ought to be reauthorized, and you said on more than one occasion that it ought to be at a higher level of funding. Is it really necessary in the interests of solving this problem to delay? I know that originally the timetable was to have reports in before year-end, but it seems to me that there is enough evidence, living testimony of the exposure to pollutants that we've had in various parts of the country. In my State of New Jersey, the problem is particularly obvious that we ought to get on with this. If you agree that we ought to reauthorize, do you agree that we ought to fund at a higher level? Why can't we move ahead with the reauthorization before we get into the election season and have this action deferred just because there's no time to take it up? You said that you saw in the House bill what I think you described as "negative effects." We don't need a report in writing if you feel that way.

Would you mind stating here for us what you saw? What were some of the negative effects in the House bill?

Mr. THOMAS. Yes, sir. Before I get into the specifics, let me say generally that I think the very things you're dealing with now, and the difficult issues that you're trying to come to grips with, and trying to ascertain the implications of those things for the program, positive or negative, are the reasons why I feel it should be necessary to continue this dialog and discussion on over into next year both to gather the data—the data that's being gathered, and to have the full debate, I think, of the issues before you incorporate some of these provisions into the bill so that you will know exactly what it is that you are reauthorizing and exactly how much money is required in order to carry those provisions out.

To give you some specific examples over on the House side of those kinds of things—let me just hit a few.

One provision in the House bill would shift the responsibility for providing operation and maintenance at a cleanup site—and I know of one that's of particular interest to you in New Jersey—from the State authorities to the Federal authorities, that we would have the responsibility to provide operation and maintenance forever or for as long as is necessary at a site at a rate of 90 percent Federal and 10 percent State which is the provision, as you know, that we clean up a site unless it's publicly owned, and then it's 50/50.

That could have substantial implications for the program in a couple of respects. One is that if you reauthorize the program for 5

years, then am I to assume that I should go ahead and set aside on each project I fund the amount of operation and maintenance that that site is going to require? That may be a substantial amount of money over a period of time that will be taken off the top as far as the first 5 years of the program is concerned, the time frame within which the House considered reauthorization.

Senator LAUTENBERG. Apportioned over each year? You're not making the full-term commitment?

Mr. THOMAS. Well, the full term commitment would certainly be beyond 5 years. In other words, many sites would run 20, 30 years. I approved one 3 weeks ago that would run forever. Now, do I take that amount of money off the top when I fund a cleanup of that project and set it aside? If I'm going to assure that the Federal Government participates for the duration of that O&M, I would have to. But that's a question.

The second question is, what are the financial implications in the long term for a lot of these projects? It appears to us, when we take a look at what the long term implications are for O&M at any of the sites, that we're talking about a substantial amount of money that grows exponentially as we go into out-years to the point that maybe 7 or 8 years from now, the first half million dollars that you appropriate to us goes for O&M projects of past projects, as opposed to cleaning up any new sites. As a matter of fact, our projections are that after the next 5 years we would have nearly $300 million in O&M that would come off the top based on our experience to date.

And the final issue which concerns me greatly is, who has primary responsibility, and maybe, what is the best place to lodge responsibility for ensuring that maintenance is maintained at one of these sites for the long term? I'm of the opinion that the best place to lodge that responsibility is with State government. I speak as an ex-State official, and I feel that the responsibility in the long term at these sites should be lodged at the State level because I feel they'll be more responsive in the long term for ensuring that the site is monitored, the funds are provided if they've made the commitment to provide the funds up front.

So those three things on State O&M are substantial implications, and implications that I think we ought to fully appreciate before we make that slight change in the law.

A second category of concerns that I've voiced are those relating to citizen suits. I fully understand and appreciate the interest in the House and in the Senate in providing an opportunity for citizens to participate through the court system in the Superfund Program. But I would venture to say that the Superfund Program is substantially different than our other environmental statutes, and may have a substantially different impact as far as citizen suit participation is concerned.

On the House side, for instance, the opportunity for citizens to bring suit, regardless of whether we have a response action underway at a site—it would have the implications of possibly complicating tremendously our ability to negotiate a cleanup at a site if we have various parties bringing suit. It would certainly be a negative incentive for responsible parties to negotiate a cleanup with us if they were trying to litigate with citizens at the same place.

Additionally, we may well have response actions underway at a site under our 104 authorities and at the same time find citizens bringing suit at that site.

Additionally, there is a potential for citizens to bring suit against us when we don't meet any mandatory provisions of the act. And that's another thing they've done on the House side and that you're looking at on the Senate side—including a substantial number of mandatory provisions of the act. We may find we're tying up a substantial amount of our resources defending ourselves at a variety of places around the country where we've been sued for not meeting mandatory provisions in the act.

Those are the kind of things I'm talking about, Senator. I could go on—the Federal Cause is another area; how clean is clean, the standards you want us to meet through cleanup. These have substantial implications, not only for dollar resources, but for timeliness of cleanup. It almost runs to the opposite of the objectives to get on with this much faster. Mandatory schedules and mandatory standards—there's one on the House side particularly that's onerous as far as we are concerned. Technically, some of those schedules just can't be met; and certainly, the cost implications far outstrip the revenue side of the bill. I don't think they've been brought into balance at all.

So those are the kinds of things that I'm concerned about. I'm concerned that the cumulative effect of passing a bill like this could be to substantially slow down the momentum that we've attained in the program for cleanup.

Senator STAFFORD. Thank you, Senator Lautenberg. After this first round we'll go to 10 minutes, I think. The first 5 seemed to be inadequate, but we'll stick with 5 until we've all had one round and that means, Senator Evans, that you're recognized.

Senator EVANS. Thank you, Mr. Chairman.

As long as we're on this subject let's continue along the same line. Do you have any feeling that the Superfund itself and its activities may be something along the same line as the Interstate Highway Act of the mid-1950's where we began with a problem and a challenge, but essentially nothing in place? We have spent most of the last 30 years building an interstate highway system, most of which is now completed and the shift, quite conclusively, is toward the necessary operations, maintenance, and reconstruction. Do you have a feeling that this same sort of thing will happen in terms of the Superfund, that we will embark on a long-delayed cleanup of inadequately handled sites in the past, but once we get to a certain stage, that probably the focus will be more on operating and maintaining those adequate sites rather than having to go through the crash cleanup problems that we've had?

Mr. THOMAS. I think that it's much more of an immediate issue, Senator, than, say, the highway system program was in that as we deal with each site now, a major component of that site decision is assuring that there's going to be operation and maintenance at that site in the future. Under current law the State gives us that assurance. We provide a certain amount of funding for the States as they begin to pick up that responsibility, but having that assurance up front I do think is critical for the long term in some of these sites. We're finding that a large portion of these sites will re-

quire maintenance. It might not be much in terms of dollars, but in other sites it might be substantial.

Senator EVANS. I'm not quite sure whether I heard you say that you thought that was basically a State responsibility. Do you think that the long-term maintenance and operation should be solely a State responsibility, or State and local government responsibility, or that there is some Federal responsibility that might share in it?

Mr. THOMAS. I think given the scope of the problem we're dealing with, and given the fact that we've got to move on that problem as fast as we can—that is, to get in place, clean up solutions at these sites—the responsibility for the long-term operation and maintenance should be a State and local responsibility, looking primarily to the State to assure that. I think our responsibility should be to move out, deal with the imminent hazards—which we do with 100-percent Federal funding—and deal with the long-term hazard, which we do with 90-percent Federal funding, and give the States a leg up on the operation and maintenance, which we do by picking up the first year of that at 90/10. From that point onwards because of responsiveness and responsibility for long term O&M, in my opinion, resting more appropriately with State government; and as far as spreading the overall financial responsibility on the long term—in my opinion again, resting primarily with State government in this regard—the current provisions of the law are the appropriate provisions.

Senator EVANS. I want to get to another question so I won't linger on that any more, although I do have some concern about what happens in a State which may have a large number of Defense Department installations or other Federal installations which are producing the waste, and compared with the size or the capability of the State, they may have quite a substantial operating and maintenance requirement with most of the waste coming from Federal facilities.

Mr. THOMAS. Senator, that's a good point. Let me make a couple of comments which are caveats on what we just got through talking about.

One is, as far as Federal sites are concerned, obviously the Federal Government would bear the responsibility for the operation and maintenance, as they would for cleaning up the site. That should continue to be a Federal responsibility on a Federal site.

Senator EVANS. I'm not talking about Federal sites so much as I'm talking about potential Federal installations producing waste which goes to a site operated and maintained by the State.

Mr. THOMAS. Which really, I guess, comes to my second point. And that is, overriding our whole discussion of operation and maintenance should come a recognition of the enforcement provisions of the act, and that is that responsible parties should ultimately be the ones to bear the responsibility for operation and maintenance funding where we can get it. And if that's a Federal agency, we consider them a responsible party just as we do a private agency. So they should bear the ultimate costs. Federal agencies, we find, are the ones that are the easiest to find and the easiest to get that money out of, so I think that as far as O&M is concerned, if they're a contributor, they certainly should fund a portion of that O&M.

Senator EVANS. Mr. Chairman, I've had my 5 minutes. I'll wait until the next round.

Senator STAFFORD. Senator Simpson, some of us made short opening statements. If you have one before questions, this would be a good time to do it or put it in the record.

Senator SIMPSON. Mr. Chairman, I appreciate that, and I will take 5 minutes now if I can?

Senator STAFFORD. Certainly.

OPENING STATEMENT OF HON. ALAN K. SIMPSON, U.S. SENATOR FROM THE STATE OF WYOMING

Senator SIMPSON. Thank you very much, Mr. Chairman.

Well, this is the same old stuff. I cut my teeth on this thing, called Superfund, and the chairman of this committee was Senator Randolph; the ranking member, Senator Stafford. They worked with me. They were very patient with me; I remember that distinctly, because I was a rather rambunctious fellow on this one, because I said: "I don't see how that can work, the way you're trying to do it." And with your thoughtfulness, Senator Randolph and Senator Stafford, we came up with something. And it seems to me that nothing has changed. The staff just continues to crank out the same stuff we threw out so long ago. I just don't know where that ends.

When does that end, when it's just a regurgitation of the same stuff time after time, kind of like getting pecked to death by ducks.

It just keeps coming on and coming on, and I know the cast of characters here; they will not only outwait us, they will outwit us as Senators. It doesn't matter what party.

We have an EPA that's trying desperately to do what's required. People have respect for Bill Ruckleshaus. He's actually doing things, but we're not "moving fast enough" because of only six or seven sites.

The issue is, you could just pour the money down this hole and not move any more swiftly than you could possibly do right now. You could literally just pour it down this rathole and not move any faster, except we'd be spending a lot of bucks and everybody would be cheered by that.

So it's tiresome for me to watch that, and then to see these amendments that were circulated, I practically have to get a telegram to find out what the staff is doing on these things. I've talked to the chairman about that and you've been very attentive and respectful to my requests. But that's tiresome, very tiresome. And that's not going to continue.

So this staff is either going to circulate these dazzling things—and they know what I'll do with them; that's why they don't circulate them to me—and that, as I say, is tedious.

So these burdens are placed. The drawdown on this fund is absolutely extraordinary. Everything here is a drawdown on this fund. There isn't any way any company in America can fund enough to take care of these dazzling things.

And then not only that, but here is absolute absurdity—how much time do I have?

Senator STAFFORD. You've got at least 3 minutes.

Senator SIMPSON. Two?
Senator STAFFORD. Three.
Alan, you're on a roll now.
Senator RANDOLPH. I'll give you my 3 minutes.
Senator SIMPSON. I want to have something that works. I promise you I will not work to obstruct; I will not do that. I have not done that. I will visit with these staff people. I'm not trying to make it difficult for them.

But here's an example. Where do we go when we look at several of these things, provision 6—there's a drawdown de luxe; provision 5—there's a drawdown de luxe; the Attorney General is entering the fray; there are no limitations there resulting in another activity to drain the fund. How are we ever going to get to where we almost reduce hazards to below background level? That can't be; there is no such thing as that. That's beyond human ability.

But I guess the one that got me—because if the rest of the language is all like this, then we're in deep trouble—and that's No. 10. This one changes the definition of disease and "behavioral abnormalities." And now we find that these two terms, and listen to this language: "include changes in speciation or population size or ecological niche." I will let you draw your own fanciful conclusions as to what in the world that may mean, especially "speciation." I would appreciate it if someone would specifically "speciate" me on that one.

So here we go again, and all of it intended to just kill the fund or else come back to the drawing board very quickly and just fund it some more. Because there isn't any way that the industry of American can do it, and I am not a captive of the industry—not a captive of any organization in this place; I chair Nuclear Regulation and my voting record there is 62 percent, so I know I'm doing something right there, because I've never been involved in just losing sight of what we're doing.

Well, Mr. Chairman, I'm going to outline in some detail the various things that cause me concern. It's just an extraordinary thing, and always in the background is the Federal toxic tort; that never leaves us. That's an obsession here; it's rich, underground, like a pool, and we're going to go now through Federal toxic tort again, and ubiquitous chemcials, and speciousness and all the rest of it, and if the American people really knew what it meant, they'd be ahead of us.

I want to work to do something with it, and I promise you I will, but I'm not going to see us turn something onto the Senate floor which is just going to get torn to shreds. That's what would happen to this one.

Senator STAFFORD. Thank you, Senator Simpson. We will be happy to work with you to attempt to take care of some of the issues of concern to you.

In view of the interest, it would be best now if we went to a 10 minute sequence for members rather than 5 minutes.

The Chair now notes that Senator Domenici is here. Senator, if you have any opening statement that you wish to put in the record or deliver, this would be a good time to do it, and we'll stay on the 5 minutes which the rest of the members have had for an initial

round of questions, and then we'll go to 10 minutes on the next round.

Senator DOMENICI. I'll wait, Mr. Chairman. I'll have my time shortly.

Senator STAFFORD. All right; then we'll start a second round.

Mr. Thomas, we understand how distorted words can get about so easily here in Washington as rumors, but one of them that has come to the attention of this Senator is that EPA probably could fund or handle and manage appropriately a program funded at about $1.5 billion a year starting next year. Could you comment on that?

Mr. THOMAS. Senator, the request that the Congress is looking at now for next year that we made was $640 million. We think that's the appropriate level for funding for the program. We think that that not only responds to the sites that we will have ready for construction and design, but also will give us an adequate level of funding for new site starts, continue our assessments at an accelerated rate, continue our removal program at an accelerated rate; so we think that a $640 million appropriation level for next year is the appropriate level. We were concerned that the House appropriation was $40 million less, but we're pleased to see that the Senate Appropriation Committee reported out the full $640 million. We are hoping that the conference committee will give us that $640 million.

Senator STAFFORD. All right. That covers next year. How about, say, the 5 following years?

Mr. THOMAS. Senator, that's one of the very issues we're trying to come to grips with, and that is, at what level the program should operate at, pace. It clearly will go up as you look at the pipeline that we talked about last time, of projects. As the project hits construction, the amount of money required is substantially more, about a tenfold increase, as a matter of fact, from the investigation stage. So as you have 100 sites, for instance, that go from the remedial investigation stage to the construction stage, you're talking about an increase tenfold. So we're trying to come to grips with exactly what that funding level will be to support the program, and what our ability is to manage that.

Senator STAFFORD. The House bill, as I recall it, now has $9 billion over the next 5-year period. At $1.5 billion, even a mathematician as poor as I am could figure out that's about $7.5 billion over the next 5 years. Could you speculate at all on whether you could properly manage a program at $1.5 billion a year following 1985?

Mr. THOMAS. Senator, it largely depends on what's in that program we're trying to manage. If that includes, for instance, implementing a new underground storage tank regulatory program, which the House bill has; if it includes a whole series of new victims' assistance provisions dealing with citizen suits; if it includes trying to be responsive to the cleanup standards incorporated into the House bill—one, I don't think, I know exactly what the full cost implications of that are. It may be substantially more than the figure you were given. Additionally, I would have great difficulty in trying to manage a program with all of those provisions in there.

The concern I have, Senator, is that as we look at all these new provisions in the program, we're going to be turning around after trying to come to grips with some of them—the toughest problems that I've come to grips with in a long time in this program. And now coming to grips with a new series of really tough interpretive problems. What do these new provisions mean? How do we implement it? Going through the same kind of litigation we've gone through the last 3 years, getting interpretation from the courts.

So it's hard to say how much it would cost, and could you manage a program that includes those kinds of new provisions. It's just a difficult issue to come to grips with.

But the pace of the program issue is one of the things that we're working hard on. We will incorporate it into the study we intend to give you.

Senator STAFFORD. Well, thank you very much. I have a question here that I think would be best answered in writing, and that has to do with how many underground tanks there are in the United States and how many of them are at commercial installations, and so on and so on. I'll submit that to you in writing, Mr. Thomas, if I may.

Mr. THOMAS. Yes, sir.

Senator STAFFORD. To how many releases of pollutants or contaminants has the Agency responded? And if you can tell us now, that would be fine. We'd like you to identify each of the pollutants or contaminants and provide details of the release, the nature and extent of of the response, and so on. Would that be best done in writing also?

Mr. THOMAS. I think so, Senator.

Senator STAFFORD. Are the penalties contained in the law adequate for the Agency to do its job?

Mr. THOMAS. We do think there are a couple of areas there, as we were looking at the proposed penalties that were in the Senate language, that we weren't sure whether the Senate was dealing with them or not. There are some consistency issues, primarily on the civil penalty side. Section 103, which has to do with reporting, and section 104 also, we feel that both of those, particularly as it relates to civil penalties, is an area that we're not sure whether the Senate intended to include those in that list of penalties or not, and we think would go well with the penalties that the Senate has incorporated.

Senator STAFFORD. Under current law, does the Agency have the authority to relocate persons or communities as part of a removal action?

Mr. THOMAS. As part of what, Senator?

Senator STAFFORD. Under current law, does the Agency have the authority to relocate persons or communities as part of a removal action?

Mr. THOMAS. We have the authority and do relocate people in a temporary relocation during a removal action, Senator. We only proceed with a permanent relocation as a part of the remedial action.

Senator STAFFORD. What is the legal basis for the Agency's conclusion that State governments must pay 100 percent of costs of all future operation and maintenance?

Mr. THOMAS. It has to do with that section of the law that requires that States provide assurance for the operation and maintenance of a site at the time we initiate the cleanup of the site.

Senator STAFFORD. If the law were amended to require a 90/10 Federal/State share for the first 5 years of operation and maintenance, and a 50/50 share for the following 25 years, what would be the total costs and how could they be divided? Once again, if you'd rather answer that in writing.

Mr. THOMAS. I can give you a projection on that as we were discussing earlier. It would be in the hundreds of millions of dollars.

Senator STAFFORD. Hundreds of billions?

Mr. THOMAS. Millions.

Senator STAFFORD. Millions.

Mr. THOMAS. At least for the first 5 years.

Senator STAFFORD. If the law were amended to require a 50/50 match only for sites which were owned and operated by State or local governments, what would be the total cost of the fund?

Mr. THOMAS. We're doing some review of that right now, and it looks like—I've got some figures here, as a matter of fact—under the definition that was in the proposed Senate language, I think we feel that under the current national priorities list there would be 44 sites that would be termed a site that would qualify for the 50/50 match, whereas under the current language, there are 120 sites that may qualify. The reason I use may be a 50/50 site is that in some of those we still haven't completed the full historical review of the ownership issue. But that's the kind of difference that we're looking at, I think, and so you're talking about 80 sites on the current National Priority List between your proposed language and our current language, and you're talking about a potential of $10 million a site, $8 to $10 million a site, so that's the kind of implications that that change would make given the current list of 546 sites.

Senator STAFFORD. Thank you very much, Mr. Thomas.

The Chair is going to be strict with himself on time, so my 10 minutes are up. I'll turn to Senator Randolph.

Senator RANDOLPH. It will not be improper for me, in the absence of Senator Simpson, because what I am going to say can be said in his absence or if he were at the table. I recall talking with a friend of mine; he said: "There's an old saying: 'The past rises before me like a dream'." But he said, "That's not true in my life." He said: "The past rises before me like a nightmare." And that's what Senator Simpson was talking about. It's always very helpful to me to see him dissect, as he does very well, the problems that are before us.

We have touched here upon penalties. Where do they fall? Do they fall in the category of financial penalties, or jail, or criminal penalties?

Mr. THOMAS. We have both provisions as far as the act is concerned now, both criminal penalties and civil penalties.

The proposed penalties that we looked at over the weekend that have been circulated increased, to a large extent, the criminal penalties. There's some inconsistency in the civil penalty size; in other words, the way the criminal penalty went up versus the way the civil penalty went up. Additionally, there are some areas where

civil penalties—you have not included civil penalties, which we feel would be an appropriate category. So the dollar side of the penalty provision is the one we feel probably hasn't been addressed in some of the penalty provisions you're looking at.

Senator RANDOLPH. Well, you're saying then, that if increased penalties were used in greater degree and intensity, that would help enforcement? Am I right in that?

Mr. THOMAS. Yes, sir. Yes, sir.

Senator RANDOLPH. Would it be helpful also to have penalties for violations in what we know as section 104 orders?

Mr. THOMAS. We feel it would. We feel it would be very helpful and would give us a substantially increased enforcement tool.

Senator RANDOLPH. Thank you, Lee. I'll withhold further questions.

Senator STAFFORD. All right.

Senator Lautenberg.

Senator LAUTENBERG. Thank you, Mr. Chairman.

I am sorry that my esteemed colleague from Wyoming is not here. I had the feeling that he didn't like some of what was going on here, but maybe I misread him.

The fact is there are all kinds of indications by the public at large, whom we represent—not only in my State, but throughout the country—that say that the environmental condition of our society is the overriding issue that affects people; more so, in some cases, than nuclear war and defense and unemployment and things of that nature. I, for one, am distressed that this play on words about urgency and definition of what constitutes cleanup, what constitutes maintenance, killing funds—we're killing people. All of you, everyone in this room, I think, must have had an opportunity to hear testimony by people who live in those areas and who see their children going bald from chemotherapeutic treatment and dying in full view of their families. I think that this is a responsibility that this Nation owes its people. We spend $290 billion a year defending our country. I assume that means defending the health of its citizens, and I think we ought to get on with defending the health of our people in a way that we have some control over.

We debate about what the effects are of pollutants and hazardous materials on human beings. We ought to just use, as an example, what's happening with our striped bass populations. We love striped bass, and we love people even more, and the article sent around by the chairman tells you what happens as these things mutate and disappear in front of our eyes. I think we ought to get on with whether we support this or we don't, and make those decisions.

Now, Mr. Thomas, could it be that a definition of cleanup or maintenance is somehow or other blurred when we compare the two? Isn't maintenance often an extension of the cleanup problem?

Mr. THOMAS. It is, Senator, and that's a good point. As we move into a cleanup decision at a remedial site, particularly those where we've got subsurface contamination, where we're going to clean up ground water, there is the definitional issue of, what is the remedial action? In other words, what is the cleanup project, the construction part, the front end part of that project versus what is the long term maintenance part of the project?

One of the things that we have done over the last year is to define those two things in such a way that I think that the concern that's been raised in some quarters about O&M and the impact on States would be dissuaded to some extent. That is because many of the projects we move into, the front end of an operation of a ground water cleanup, for the first 2 to 3 years of that project, is the heavy end of that. We would define that as a part of the remedial action as opposed to the long term O&M. The continuation of that in a monitoring sense, and even if it were a continuation on the long term or a steady state cleaning out of certain substances, it would then be defined as O&M. Now, that guidance has been developed.

To give you a specific example, we got into that a few months ago with Price's Landfill. You are familiar with that. The end result was, we suggested to the State of New Jersey that the way they were going with that project could be more appropriately engineered and more appropriately defined to have a substantial up front construction component as opposed to just looking at a containment and long term O&M component. And so we're now in the process of looking at that as another alternative. The end result would be substantially more up front costs that we would be providing on a 90/10 basis as opposed to the long-term costs, and at Price's the long term cost is probably 30 years, that the State would bear. But it is that definitional issue and you're absolutely right, it does have a substantial impact.

Senator LAUTENBERG. How about the ability of States to provide their own funding for initial programs? Do you have any feel for how many States might be able to provide some initial funding to get these programs underway? You know what's happened in New Jersey, of course, that we've raised a substantial sum of money. We are reluctant to use it until we know that we're going to get credit for these costs that we incur on these projects. We're willing to move ahead; the urgency is the primary requirement, as far as we're concerned, but we haven't yet cleared up the cost credit situation. But how many States do you think can get on with these projects on their own and begin the process?

Mr. THOMAS. I don't have a definitive answer for you as far as numbers of States, Senator, but just let me make a couple of comments.

One, we are looking at State participation in the program to date and what we think the implications of that are with the State association that represents the hazardous waste State agencies. We have done a survey of the State agencies and we're analyzing that now. Part of that analysis does include the kind of information you're interested in. To this point we have not had a project at a 90/10 level that we're not able to move forward with because of States not having the money. We have had projects at the 50/50 level where that's definitely the case.

A number of States, and we're analyzing the information now to determine how many and in what way, have enacted State legislation to establish their own authority for funding their portion of the Superfund Program, whether it be the ten percent capital cost or whether it be the long term O&M cost.

Additionally, a number of States have gone beyond that and are funding their own cleanups 100 percent, where we're not involved. And we're pulling that information together now. But I would say that more and more States are looking at, and should look at, the financial implications—not only of this year, but of years to come. The Superfund Program—not just O&M, but just the 10-percent cost share that's going to be required. I know that New Jersey has done that and that they've pulled together an overall plan for the next 4 years for their sites in their State; not just Superfund sites, but sites beyond that, and have looked at funds to provide their share.

States have looked at things from bonding authorities to taxing systems. We provided a series of opportunities for States to come in to regional seminars where we basically had a several-day session on what are the alternatives a State could look at for providing their funding. We largely had the financing people come in from most States. We had good discussion, good dialog with them, laid out a variety of alternatives.

Senator LAUTENBERG. Were they looking seriously, in your view, at developing funding opportunities, or was there kind of a "Let's wait and see, we'll let the Federal Government finally pony up on these"?

Mr. THOMAS. No, the ones who were coming in were clearly looking at the funding alternatives that were going to be presented to them when they had to make decisions, and were trying to anticipate it. I do think it's an issue, as the program moves much more quickly than it had in the first couple of years, to get to that decision at sites, that cleanup decision. States are being faced with that very issue. We're finding that many of them have already addressed it and are establishing authorities to deal with it.

Senator STAFFORD. Senator Evans.

Senator EVANS. Mr. Chairman, I agreed to yield to Senator Domenici.

Senator STAFFORD. We'll just reverse the order, then. Senator Domenici.

Senator DOMENICI. I am most appreciative, Senator. I told the distinguished chairman I would attempt to come to this meeting and as many as I could, and I have to leave in ten minutes. I wanted to see if I could ask a few questions to get myself in a position where I understand.

The chairman could correct me if I'm wrong on any of these premises. Let's see. At this point it appears to me that, number one, we had this fund that we worked very hard on. I can remember finishing it up downstairs in the leader's office under your leadership.

Senator STAFFORD. During a lameduck session.

Senator DOMENICI. Very complicated, during a lameduck session. We then had an Administrator—I don't think there's any question about it—at a minimum, did a very poor job; at a maximum, much worse. Now, do we not have a man here that is generally conceded that understands, is scientifically sound and committed, and is trying to administer this very complicated act? Is there any question about that, Mr. Chairman?

Senator STAFFORD. No, I would agree with the Senator.

Senator DOMENICI. It seems to me our principal goal and concern is that it's going too slow. We aren't getting things done. As I talked to you and as I read some background papers, that's the concern we've got. Is that a fair assessment?

Senator STAFFORD. I think, speaking only personally, that the Administrator and his principal assistants are going as fast as they can under the circumstances, and that more money will be needed for the program next year; but there's testimony now that the $640 million that's available is adequate for that year but that more money yet will be available in the years after that.

Senator DOMENICI. Well, the chairman took the next statement out of my mouth. I was then going to say it appears obvious, in order to even get what this particular bill requires of the national government, moving ahead at the pace we would like, we aren't going to have enough money.

Senator STAFFORD. That's right.

Senator DOMENICI. And I also understand—Mr. Thomas, would you correct me if I'm wrong—that you are now working in some complicated, very difficult areas that take a long time, even within the purviews of this act? Is that correct?

Mr. THOMAS. That's correct.

Senator DOMENICI. You have not, for one reason or another, submitted to this committee in writing ways and means that you, as the Administrator suggest, to modernize and make more efficient the provisions within this act itself, albeit we are not talking about any new ones? You have not yet; is that correct?

Mr. THOMAS. No, sir, we haven't. We're in the process of doing just that based on the studies that Congress asked us to do to back up those provisions.

Senator DOMENICI. Now, is there some reason, other than time, that we can't get those yet?

Mr. THOMAS. They're just not completed, Senator. The studies that we had underway were geared to be completed by December. We've moved them to the point that we're going to try to have final drafts ready in October. It's just a matter of how fast we can get the work done.

Senator STAFFORD. If the Senator would allow me to interrupt, we discussed this earlier with Mr. Thomas and, speaking individually, your Chairman urged the EPA to produce the necessary final results by September 15 at the latest, and Wednesday following Labor Day at the earliest.

Mr. THOMAS. The Chairman asked that that be done.

Senator DOMENICI. And I gather then, Mr. Chairman, that that will be done. Is that the Chair's feeling?

Senator STAFFORD. Well, we don't expect the impossible, but October 15 is not a good day for us because I expect that not only will the Senator from New Mexico be campaigning for himself, but all of us will be out on the hustings at that time. And while most of our colleagues don't like to think about it, there may be a lame-duck session, which would mean that October 15 would be adequate. But I wouldn't want to bank on it, and I am hopeful that we can persuade EPA to reach the September 15 deadline, which would give us about 3 weeks to legislate after that.

Senator DOMENICI. Well, let me ask the distinguished Administrator if he's had an opportunity to review the various and sundry suggestions that have obviously not been weighed against, measured against, but you might submit to this committee as your evaluations so that we have them before us as various specifications, ideas of the collective and collaborative staff. Have you had a chance to review those?

Mr. THOMAS. We have gone over and made a tentative analysis of those.

Senator DOMENICI. Let me ask this question. With reference to the existing law and its goals and objectives, and aside and apart from the money required, do you not feel that there is a basic framework for a good Superfund cleanup within the law you're presently administering? It might need some amendments and modifications to permit you to carry out your job more expeditiously and without such lengthy periods of time for evaluation and ironingout of intentions. Is that one of the problems you're having?

Mr. THOMAS. I think the existing law, the one I'm administering now, is a good framework for the program and a continuation of that program, and would not require substantial modification for us to continue the program at the pace that we're now running the program, which I think is a substantially increased pace and one that I think is probably the size of program that should be managed to ensure quality as well as timeliness.

Senator DOMENICI. Do you see very much in these suggestions that have been recommended to this point that is going to dramatically improve the pace at which you can administer this program?

Mr. THOMAS. I think there's the potential for the opposite.

Senator DOMENICI. It would appear to me that we have a natural tendency to do that around here. I wouldn't be so bold as to say that's the case yet, since I haven't looked at them either, but it seems to me that when we're unhappy with something we just add more for the administrators to do, and then admonish them because they don't get them done more rapidly.

Will you have suggestions to the chairman and this committee that not only address the issue of the breadth of the act—does it do enough things, now that you're out in the field looking at the problems—but will it also address expediting the activities by making your job easier? Will you have that kind of suggestion? I don't mean easier in the sense of alleviating yourself of burdens, but, obviously, easier in the sense that it will be more direct and more clear?

Mr. THOMAS. Senator, we are aiming toward developing those very recommendations as a part of the Administration's position on what we should do on reauthorization of Superfund. I don't want to sit here and tell you that we're going to have those kinds of recommendations ready for the Senate in the timeframe that this committee is working. I think that would be extremely difficult to complete and have not only the studies completed that we're in the process of doing, which I think provide substantial data to make those recommendations, but also then, having developed the recommendations and reached a consensus within the administration in this program, which is broad as far as implications—not just for our Agency, but for Department of Justice and for HHS, as well, as

well as other agencies—to have those kind of positions ready for this committee to take up in the timeframe that the committee is trying to complete its work. It's going to be not only difficult but impossible, I'm afraid.

Senator DOMENICI. Let me ask you this question, Mr. Thomas. Do you see within the framework of this law, given adequate money and adequate staffing and some clarifications, the framework for accomplishing a significant and substantial portion of the cleanup contemplated by Congress when it passed the Superfund law?

Mr. THOMAS. You're talking about the current law with some clarifications?

Senator DOMENICI. Yes, sir. And more money.

Mr. THOMAS. Yes, sir.

Senator DOMENICI. Thank you, Mr. Chairman.

I might just add, in response to your concern expressed to me about a bill, I would say from my standpoint, for what it's worth, I am willing to work with you in an effort to get a bill this year. However, I don't think that means that we redo the entire world of Superfund activity in the name of expediting and making more operative a law that has suffered from some poor management and is very difficult up front, and is probably lacking in money, to the extent that some would like to write a whole new law with 40 or 50 more new provisions that will go through the same history, just as sure as we're here, of delay and interpretation and misunderstanding. I would say to my good friend, I'm not interested in putting that burden on somebody in the name of doing something wonderful and good for the American people because I think it probably won't work.

Thank you, Mr. Chairman.

Senator STAFFORD. Thank you very much, Senator Domenici.

Senator Evans.

Senator EVANS. Let me get a little more specific along the same lines. Collectively, I fear that we would spend most of the money and most of the time in courts rather than in cleanup, and I think cleanup is the goal that we seek.

One of the proposals talks about the degree of cleanup of hazardous substances, and suggests that the degree of cleanup of pollutants, contaminants in the environment and the control of further release which returns the environment to a naturally occurring or background level of such hazardous substances or pollutants—that's an interesting proposal. There may be a parallel somewhere else in law, but all of the other pollution control laws of which I'm aware have certain limits on what can be done but don't suggest returning to a background level. That, in essence, in my view, would be zero pollutants. We don't do that in our Water Pollution Act, we don't do that in our Air Pollution Act, we don't do that in most other acts of which I'm aware. Is it even possible or practical to live up to a proposal like that?

Mr. THOMAS. It's not in a number of cases, Senator, either possible or practical to live up to that. It's not possible in some cases, technically, to do that at some of the sites we're talking about if you consider background as you indicated, some kind of no pollution standard.

Additionally, it's not practical in some cases. You may in fact cause more environmental harm by your efforts to get everything out than the good resulting from getting it out in the first place. I'm thinking specifically about some of the projects we have that—where we are dredging river bottoms and others. If the standard is that we're supposed to get everything out, one, the technical difficulty of trying to determine how to do that—it's going to be impossible in some cases and tremendously expensive in others. Second, I think it would cause substantial damage in some cases in actually trying to do that.

Senator EVANS. Let me turn to a couple of quick ones. Talking about the toxicological data and the health effects, one of the proposals would suggest that the Administrator shall, within 6 months after the date of enactment of the Superfund amendments of 1984, prepare a list of the—well, it goes on to require that when they implement the health-related authorities, the Superfund Health Agency must be provided with adequate personnel but no fewer than 100 full-time equivalent employees.

Do you have any idea why 100 employees is magic, or where in the world that proposal came from?

Mr. THOMAS. No, sir, I don't. That is the program that is administered by the Department of Health and Human Services.

Senator EVANS. I can understand adequate personnel; that makes sense. But it just seems to me that 100 is a nice, round figure pulled from somewhere, but I don't know what backs it up.

Mr. THOMAS. We don't either, Senator.

Senator EVANS. Amendment No. 19 would propose that, among other things, Attorneys General in the recovery of litigation costs, they may "award costs of litigation, including reasonable attorney and expert witness fees, to any State attorney general who prevails or substantially prevails." Do you have any idea whether that's intended to go to the State attorney general himself, or to the State that he represents?

Mr. THOMAS. No, sir. I think that provision has all kinds of implications, and I don't even know what all of them are. It's an opportunity for State attorneys general to get a substantial amount of funds up front, apparently, or to be reimbursed by the fund for any costs they envision. Costs could be substantial—I don't know whether that means if they lost the case, they'd have to pay the money back with interest, or what it means.

Senator EVANS. It seems to me there is a similar proposal which may have some merit—the necessity of hiring or acquiring technical expertise, which may be difficult or costly for someone who is suing. This proposal would allow that to be forwardfunded, I guess, then come out of any recovery? I don't know what happens if they don't recover. The lawsuits don't always come out one way.

Mr. THOMAS. As I understand it, this is to set up a provision for States to sue the Federal Government where the Federal Government is the responsible party. So, for instance, if the Department of Defense is the responsible party, the State attorney general could sue us, the Federal Government, the Department of Defense. We would pay him the money it cost to do that; but as you said, if he was not successful in that, I guess that means that he, then, would reimburse us for the money out of the fund. If he was suc-

cessful in it, eventually he would reimburse us anyway, so that it would go back into the fund, I assume.

Senator EVANS. Let me turn finally to funding. The proposal here is for a $9 billion, 5-year fund from feed stocks and waste end taxes. I think the term used on the waste end taxes was—let me make sure I get it accurately—a waste end supplement at a rate sufficient to cause behavioral modification, which is an interesting term.

Have you examined, or do you have any comment, on the potential problem of waste end taxes causing a waste end producer to not bring anything to a source where a tax could be levied, but just encouraged to engage in illegal midnight dumping?

Mr. THOMAS. There is that potential. One of the things we're looking at on the taxing study that we're doing is that we're looking at experience to date with the feed stock tax; we're looking at the alternative of a waste end tax; we're looking at the potential of a combination of the two taxes. We're trying to look, on the waste end tax, at two things: the experience to date that a number of States have had in implementing a waste end tax and the administrative burdens associated with it, and the revenue produced. So the revenue issue is one we're trying to take a look at.

The second one, which is the one you've talked about, is most difficult. That is, what do you have to do with a waste end tax to have any impact as far as disposal practices are concerned? And where do you reach the point that you're not just modifying disposal practices to some other, more appropriate disposal practice, but in fact, modifying it to a less appropriate disposal practice? Trying to come up with that is, I think, going to be extremely difficult. And trying to say you're going to do it in a bill without thinking that you're going to have to change it fairly frequently—if it can work, you are going to have to have the flexibility to modify that tax on a very frequent basis, based on changing circumstances.

Senator EVANS. I remember during one of the earlier hearings on this subject, one of the witnesses suggested that it wasn't appropriate on the feed stock end to levy a tax on feed stocks which may in themselves be toxic, but which are used in the manufacturing process to turn out an entirely benign end result. I think the example used was—I forget the chemical, but the end results were plastic garbage bags.

Mr. THOMAS. One of the studies we are doing is looking at the substances we're finding at these sites and trying to back them up through the process chain to see how close they are to the feed stock taxes. I think we do find so far a fairly close correlation. But we will provide to you, in that study, a good analysis of that issue.

I think there probably will be some of those aberrations when you look at that study result.

Senator EVANS. Thank you.

Senator STAFFORD. Thank you, Senator Evans.

Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman.

Mr. Thomas, I apologize for not having been here earlier. There was a delay in my flight coming in; so if I ask any questions which you have already been asked directly, please indicate that and I'll proceed to another subject.

I'd like to deal first, if I could, with the issue of victim compensation. As you will recall, there was included in the bill that was reported by this committee in 1980 a victim compensation provision. It was then deleted late in the lame duck session negotiations under threat of filibuster by opponents of the legislation. Instead, we inserted a provision in the law requiring a study of the adequacy of existing common law and statutory remedies. That study was completed last fall, as you know, and it concluded:

> Although causes of action do exist for some plaintiffs under some circumstances, a private litigant faces substantial substantive and procedural barriers in an action to recover damages for personal injury or property damage due to hazardous waste, particularly where the individual claims are relatively small.

I have long failed to understand the logic of a law which permits recovery for damage to property, such as trees, if they're owned by a government, but denies compensation to human beings injured under similar—or, indeed, under identical—circumstances. We now have what I believe to be a gross miscarriage of justice that, in a hypothetical example, if discharge occurred that damaged a tree and a child standing next to the tree, the owner of the tree or the Government could recover compensation for damage to that from the fund. The child could not recover that and would be left to the State court system, which this study concluded last fall is inadequate; a conclusion, I think, that most of us were already aware of.

The staff draft now before us calls for the creation of a Federal Cause of Action for the recovery of damages arising from personal injury from hazardous substances. As I understand it this would not affect the fund because it would authorize an action in Federal Court granting concurrent jurisdiction with existing State remedies against those persons or entities responsible for the injury.

My question is whether you have a position on the proposal for the Federal cause of action, and then I'll go on to other ways of dealing with the problem that I've suggested. But I'd like to begin with that one.

Mr. THOMAS. Senator, we didn't discuss that earlier but I did make a comment in the beginning that I regretted that Jim Barnes, our general counsel, was not able to attend today. He had a meeting that he could in no way reschedule at the last minute. Jim, as you know from our last session, has been the individual in the Agency who has really worked on the victims' compensation element, as opposed to myself. I have, from a technical point of view, supported the work that he has done. I think that Jim would be in a much better position to discuss that with you and with the committee, and I urge the committee to not only take testimony on the legal issues, including Federal cause of action, beyond my discussion today, but to take that testimony beyond our Agency; that is, to incorporate the Department of Justice and HHS personnel as well as others in that discussion. I think it has broad implications. We, at our last hearing, discussed our reservations about trying to do that, what this Federal cause of action, for instance, would in fact provide and would not provide. I think, as you recall from that study, there were reservations about this as a remedy to the problems that were identified by that group.

But I really don't feel entirely comfortable in trying to discuss the legal aspects of it, and would urge the committee to do that and to take testimony about the legal aspects of it, and would suggest that Jim would be an excellent witness from our Agency to discuss that. We do have concerns and don't support, at this time, the incorporation of a Federal cause of action into the reauthorized bill.

Senator MITCHELL. Well, may I ask whether you have any reasons for your lack of support for it?

Mr. THOMAS. Senator, the difficulty—I won't speak to the legal issues, because I'm not capable of speaking to the legal issues—the difficulty we have from a technical side in trying to establish a compensation program or trying to establish a cause/effect link between the kind of substances we're dealing with and the potential for damages as far as humans are concerned is the most difficult issue, I think, to deal with in the whole health effects arena. We find ourselves trying to come to grips with that at these sites. We find ourselves, when we look at the broad issue of whether to establish a Federal cause or a compensation scheme under this program as opposed to some other program, trying to look at the full range of implications—if we can't find linkages in this area, should we not be looking at similar kinds of provisions for similar kinds of potential victims in other areas? And what is the best solution to the kind of problem we're trying to come to grips with? We have reservations that this is the best solution. We also feel that singling out this area has broad implications for Federal policy, and think those implications should be discussed.

But again, I guess I've been a participant in those discussions but more from the sidelines than as a primary to this point.

Senator MITCHELL. I would like to clarify one point here. You have used, throughout your statement, the phrase "Federal cause of action and compensation scheme" as though they were interchangeable. Of course, they are significantly different in one major respect. A Federal cause of action would not authorize any action against the fund. So as to you and the agency and those administering the fund, there would be no action; it would simply authorize a person injured to bring a suit in Federal court against the person who allegedly causes the injury. I fail to understand how that can be subjected to blanket criticism that may properly be directed, at a compensation scheme. They are fundamentally different in that respect.

You are an intelligent, able person in charge of an agency with a large number of employees with great technical skill and you have told us repeatedly how difficult it is to establish a causal relationship in this very complex area. Consider, then, the problem confronting an individual citizen who is injured, whose child dies, who suffers some permanently-disabling disease. They confront the task which you have described as very difficult. While I can understand, even though I don't agree with your objections to the compensation scheme which may be directed against the fund—I'd like to get to that in a moment—I frankly don't see the relationship of that to a Federal cause of action particularly since, at my request in a very brief period of time, the Library of Congress identified at least 36 other areas of Federal law in which Federal causes of action were

made possible. The argument always advanced against it by the Justice Department is that the Federal courts are too crowded, and this will simply create more litigation in the Federal courts. The answer to that is that indeed the Federal courts are crowded, but they are not a fraction as crowded as the State courts. To simply leave this for resolution in the State courts, where you don't have the possibility of combining cases as you do across the Federal system, seems to me to be grossly unjust and unfair and perpetuate a double standard for which there is no defense in either logic, commonsense, or equity.

I see my time is up, and I'd like to resume on the second round of questioning. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Mitchell.

Senator Simpson.

Senator SIMPSON. Thank you, Mr. Chairman.

Mr. Chairman, last week my office received a copy of a letter from 8 of the 12 members of the Superfund Study Group which was appointed under the statutes. That letter points out that the recommendations of the study group were misrepresented by some witnesses who appeared before this committee at our last hearing. For example, it was alleged that the Superfund Study Group supported the creation of a Federal cause of action, and that is not true. I think that's unfortunate that that distortion appears, because Janet Hathaway testified that the Superfund Study Group favored a Federal toxic course of action, and her testimony is included in the report which I will ask to be put in the record; and the Superfund Study Group, which is members of the bar, appointed by the American Bar, the American Trial Lawyers and American Judicature recommended for reform of judicial tort rules, directed solely to the States. That was distorted in the testimony. They did not recommend a Federal toxic tort cause of action.

That is just one of the distortions. They did not recommend a judicial presumption, and yet the testimony indicated that. The group says, "this conclusion is erroneous." They did not recommend class actions. The report expressly recommended against the use of class actions, and I won't quote from that.

The statute of limitations and the testimony of Ms. Hathaway was that the study group had considered the fear of cancer and nowhere did the study group ever consider the fear of cancer; the fact that the group never raised the issue they did acknowledge a liberal discovery rule to start the running of the statute of limitations.

Not only that, but a review of their entire minutes of the meeting show no mention of that term or its equivalent. And yet, this is the kind of thing that goes on. I don't know where else it can come from, but within this staff. It is as if there was a legion of carcinogenophobes or something, I don't know, but it's extraordinary that this continues to come into the situation. It is a wretched thing. Senator Mitchell, who is one of the most thoughtful men around this place, has proposed the frustration of all of us.

Problems do confront us. Deep questions of the medical community and the scientific community. Then there's discord and they don't agree. And so what we do, in our frustration and impatience, is do something. And that frustration and impatience I don't think are sufficient reasons to drain the Federal Treasury. I see it so

often in my other line of work, which is agent orange, as I chair the Veterans' Affairs Committee. People say, if you can buy out a village in Times Beach you can take care of the agent orange, the veterans. And I say, well, it's a little bit different; those people in Times Beach have a long-term exposure. The people in Vietnam, where we look at 1,200 members of the ranch hand study, the Air Force personnel who flew it, washed in it, moved it out of the aircraft, did everything with it known to man, and we find no difference whatsoever in morbidity or mortality rates among those people and the general population. That is a fact. It is not the kind of fact we look for when we are obsessed.

So there's no difference in the rate of death or incidence of disease, and so we continue to use emotion and fear and, sometimes, hysteria. I can show you 42 presumptions in the code on the Veterans' Administration where we have simply, out of our frustration, in failing to find out whether a disease was really service connected, we have just put them into the statutes as presumptions. And there are 42 of them. One of them is Hodgkin's disease. How does Hodgkin's disease get into the statute as a presumptive disease from service connection? It comes there out of frustration and impatience, and that's what we'll do here. And that causes me great concern.

But I would like to enter into the record, Mr. Chairman, the letter from the Superfund Study Group which characterizes the previous material as misperceiving or mischaracterizing their report.

Senator STAFFORD. If I could just say, without objection, that we will place that in the record.

Senator SIMPSON. Thank you, Mr. Chairman. (See p. 938.)

One thing this draft would do is require the EPA to finance, in whole or in part, lawsuits by the States against the Federal Government, and also lawsuits by individuals. Can you provide us any estimate of the cost of that requirement and the amount of additional litigation that it might generate?

Mr. THOMAS. Senator, it's so hard to predict. We could try, for instance, to give you an average cost, of our cost on a lawsuit. I would assume that we would be looking at the same kind of average cost, as far as the States bringing a lawsuit against us. On many of the more complex sites you're certainly talking in the millions of dollars for technical support. So on both sides, I think that's the kind of money you're talking about, particularly when you're talking about information collection and data gathering; because in these sites, information collection and data gathering means, basically, investigating the extent of the contamination, routes of exposure, assessments of potential of exposure through those routes. You're talking about toxicological reviews as well as the full range of reviews we do at the sites. The numbers of sites, I have no idea, Senator, as far as estimates as to how many it may be.

Senator SIMPSON. Let me ask one other question, then the final question. The staff report contains this provision requiring the President to provide alternative water supplies in any case in which a State or local public health officer closes or restricts a drinking water supply due to contamination, regardless of where

the contamination comes from. That is a most extraordinary proposal. Contamination can come from so many sources: cloudbursts, nonpoint source, the whole spectrum. Can you tell us the potential costs associated with that provision? It means, I guess, that if they don't have water, or they've lost it, or it's been contaminated, and you're 50 miles from another source, that the Federal Government is responsible for getting water to that source. Is that what that says?

Mr. THOMAS. Within 7 days. I don't think that has anything to do with the scope of the Superfund necessarily, as I read it. It certainly goes beyond that and gets into any kind of contamination in a water supply that a local official or a State health official should be shut down. The President will provide that within 7 days.

Senator SIMPSON. Well, Mr. Chairman, I appreciate your listening to me rant a bit. This staff is a crackerjack staff. Kathy Cudlipp, Curtis Moore, and Phil Cummings, and I'll name names. I've watched them. But in this area they're totally out of touch with the realities of life in the United States.

Senator STAFFORD. Well, I'll say to my good friend, the chairman of the Veterans' Affairs Committee, that the reason for this hearing, in putting forth these various proposals, is for us to all air our views with respect to them. Hopefully we can fashion a new bill to come out with something that most, if not all, of the members of this committee will find simple enough, direct enough, administratively operationally sound that we can support it. That's the reason we're having the hearing, to try to work in that direction.

I think that what the Chair is going to do at this point, because I have a number of additional questions, many of which could be better answered in writing than here, that the Chair will submit the balance of his questions in writing to you, Mr. Thomas; if you could give us responses at your earliest convenience.

Mr. THOMAS. We certainly will.

Senator STAFFORD. All right. And we will start the next cycle with Senator Lautenberg.

Senator LAUTENBERG. I thank the chairman.

I would take a minute to respond to my friend and colleague from Wyoming. I don't want to defend any staff and I'm not looking for a quarrel over procedure or anything of that nature, Alan, but I would tell you that in some parts of New Jersey the drinking water supply is contaminated by pollutants introduced into the ground water supply by a specific action, and people are compelled to find other sources for not only the water that they have to drink, but the water that they have to use for their other personal purposes. It's so bad that in some cases the instructions from our State Department of Environmental Protection are that when you shower, you must leave the window open to provide appropriate ventilation and you dare not heat the water too high because high temperatures of the water supply helps to emit fumes at a higher rate that could be dangerous to the person bathing.

We have a very serious problem; it goes beyond the very basic one of health, it goes to the financial ability to seek a remedy. Two hundred dollars a month to bring in a clean water supply. Very often that's the difference between a family being able to survive

or not, and it's part of the problem. Again, I'm just supplying that for informational purposes. It's a very serious problem for us.

Mr. Thomas, in section 114 of the current law, the section that preempts the State funds, would be repealed or clarified. Would it be easier for a State to set up its own funds?

Mr. THOMAS. That has been one of the issues that the States have had to deal with, Senator, and that is whether what they're doing is preempted by what's done at a Federal level. I would think that if particularly the Federal program now will include taxing authorities on—a waste end taxing authority, States will have a more difficult time in determining exactly how that could be done. Some States have gotten around that issue with similar taxing authorities in their State. New Jersey is an example. Again, they have a fund and they pretty well ask us each year, "Are you going to work on these sites with us in New Jersey this year? And if you're not, we then will move to use the fund that we have to work on those sites." So we work it out on an annual basis with New Jersey and they use the fund that they have, and we use the fund that we have. It's an administrative process that we go through.

So in that regard, New Jersey has been able to deal with that preemptive issue fairly well.

Senator LAUTENBERG. OK, but New Jersey has been involved in litigation for 2 years over the States' preemption statutory language, and it casts a cloud over our spill fund. How do we deal with that? Don't you think that the preemption issue has caused States to favor waste end tax, for example, over feed stock tax because they feel that they can more closely attribute the causal responsibility there? What's your view?

Mr. THOMAS. Senator, I really don't have any direct knowledge of that as far as the States are concerned and why they've moved with waste end. Based on the discussions I've had, though, and some look at data, I would think it would support the conclusion that they have looked at waste end because the Federal program is a feed stock program.

Senator LAUTENBERG. I heard your comments earlier on the waste end tax. Do you rule that out—as a personal, professional observation—as being a realistic or reasonable approach toward solving some of the funding problem here, or do you think that's just not a good idea?

Mr. THOMAS. No, sir, I would not rule that out. I voiced some of the concerns we have that we're looking at. There are a range of concerns about using it as a portion of the revenue for the program, how reliable those revenue projections are; and that's associated with the administrative collection issue as associated with waste ends which are far more complicated than, say, feed stock.

Additionally, looking at the implications of the impacts of taxing on waste end and taxing of feed stock, you find that you may well be taxing the same entities in that some of your largest entities dispose of waste on their own site. So you may tax at both places and end up taxing a relatively small group. And the impact that would have on that group, I think, is something we ought to take a look at, the economic implications. And these are all incorporated into these studies I was indicating.

We certainly have not ruled out that as an option that we're looking at.

Senator LAUTENBERG. The poor revenue, I think, is from waste end taxes. I'm not an advocate; I just want to understand clearly how you and your colleagues feel about it. Is it perhaps lack of enforcement that any of these things present problems of collection? There's a question of whether or not the effort is worth the result; and because very often waste end generators are relatively small businesses, sometimes it is hard to get the revenue forecast that we'd like. But whether or not there is a validity to that tax approach should not be decided by a missing revenue forecast as to whether or not it is a valid responsibility of the waste generator.

I wonder whether you could define for me "background level." What would you interpret background level as?

Mr. THOMAS. I interpret this level, the intent of this language, to be a "no pollution" level; that is, because it goes on to talk about basically natural conditions. As I understand where the language is coming from, as far as interpretation is concerned, it would be that there would be no pollution, no contaminant. In other words, you would clean until the particular substance you were cleaning up was no longer there.

That's my interpretation.

Senator LAUTENBERG. I would not have thought that.

Mr. Chairman, is it possible, since this was asked here, to get the author to tell us what background level is so that we don't have to get involved in this debate? I don't think there's a suggestion that you get back to the pristine quality of the environment as it was. You'd have to eliminate lots of people to do that, and that's not the mission of this committee. But that would be helpful.

Well, let's remove the background statement from the discussion.

What standards would you use? Would you use the criteria that we use in other environmental statutes to meet the test of protecting "human health and environment" with an adequate margin of safety?

Mr. THOMAS. Senator, I think that if Congress wants to give us their intent as to how much we should clean up—and I don't have any problem with Congress feeling they need to give us more specificity than they've given to us at this point—I do think a point of departure is the other environmental statutes and the standards established under them. However, because of several things, the strict standards under those statutes may not necessarily be the standard you want to achieve at a particular site because that standard was not developed, for instance, with a particular site in mind, in many cases.

Additionally, I think that in doing that you've got to bear in mind that we ought to do a number of things when we use those other environmental standards as the basis for a decision. One, obviously, takes into account technical capability to achieve a particular standard at a site. Take into account the environmental impact of meeting a standard. In other words, if we clean up to a certain level, do we create more problems than not cleaning up to that level? And there are cases where you will find that, as I indicated. Dredging in some cases, those kinds of things. You take that into account.

Additionally, I think that the immediacy of cleanup as far as public health is concerned, and environmental damage, should be taken into account. In other words, we may be able to move in and do an immediate cleanup at a site very quickly and not meet full standards and look at longer term actions from a monitoring point of view to determine whether we should go the full extent of the standard. So timeliness is an issue I think we should take into account.

And ultimately, one of the things that I think you would want us to take into account is, how much of the fund money do you want us to spend at a particular site in reaching a particular standard? And it may well be, particularly when you look at a lot of the other environmental statutes and the detailed standards they have, that you would want us to take into account—and I think we should—the full extent of the problem that we're trying to deal with and the extent of the problem at this particular site, and make a determination on a site-specific basis as to whether we should meet a technical standard or not. And where we find we shouldn't, state why not. In other words, state for the record why we felt it was more appropriate to move on and use money to meet standards elsewhere or to clean up elsewhere than to meet the full extent of the standard at this site.

I'm dealing with that issue right now in cleanups, Senator. Every week, as I make cleanup decisions in this program, I'm coming to grips with that issue; and it is a tough issue. If you look, for example, at the RCRA statute, a statute with standards designed for the management of hazardous waste sites in the future, and try to apply that against some abandoned site from the past, you find yourself running into some technical dilemmas and also running into some dilemmas as to how long and how much do you want to spend money at a particular site. There is very little payoff as far as public health is concerned, or environmental benefit is concerned.

Senator LAUTENBERG. I have been informed by the chairman that my time is up. Thank you.

Senator STAFFORD. Thank you, Senator.

Senator Randolph.

Senator RANDOLPH. Yes. Thank you, Mr. Chairman.

I am especially grateful that Senator Simpson has, at my request, remained because I know that he has another appointment. I do it because I think there are times, if a member is not present, that it seems perhaps inappropriate to discuss a difference of opinion. Yet I want the record to be very clear and to say that I take no offense at what the Senator from Wyoming has said today. I believe in differences being brought to this table and to the committee structure, as well as into the Senate itself. I can disagree. Senator Simpson can disagree.

I remember very well, and I call this to your attention, I remember when we passed the first Clean Air Act in this committee. I was not then the chairman in 1963; it was Pat McNamara of Michigan. But I was the chairman of the committee in 1965, and we had amendments to the Clean Air Act. We had them again in 1967. We had them again in 1970. We had them in 1974, and we had them in

1977. And some of those debates—they were not harsh, but they were very hard-faceted discussions.

My friend from Wyoming will remember that in the most recent reporting of the amendments to the Clean Air Act, I voted against reporting the bill to the Senate. Not that I did not feel that the bill had much that I could support, and do it very vigorously, but there was one very important subject on which I disagreed; and so I did what I think any member of this committee should do if he cannot vote to report a bill or amendments to an act or an original bill to the Senate, that he has not only the right but also he has the responsibility to file individual views. And that's what I have done when I did not vote for reporting the Clean Air Act amendments at the present time, which, frankly, has to do with acid rain.

And so we do have disagreements, and it's understandable that we have them. I make no case for myself, neither do I make a case against the Senator from Wyoming. I think that it's important that in this forum we try very diligently, often times with disappointments, but understandably, there has to be a majority and a minority. That's the way we work in a committee and in the Senate.

I also am glad to say that out of the difficult subject matter of the Committee on Veterans' Affairs, which is chaired by the Senator from Wyoming, that when we were unable to work out something that's in the bill that would, say, get nowhere, the Senator remembers that he was one of the architects of bringing about an agreement between the two points of view. And I was privileged to join in that amendment when it was offered as a substitute in the Senate itself.

What I'm saying today in a round-about fashion is that we do not lose by discussion and by disagreement. We only lose when divisiveness sets in. Thank you.

Senator MITCHELL. Mr. Chairman, would the Senator yield?

Senator STAFFORD. First I'm going to thank him for his statement. Thank you.

Senator MITCHELL. I'd just like to say that I share the respect that I believe all members of this committee have for the Senator from Wyoming, who is undoubtedly one of the best liked and most effective Members of the Senate. He has this morning repeated comments that he's made previously regarding the staff, and he is certainly truly entitled to those views and to express them.

But over the course of many, many months these comments have been stated on several occasions, and no one has said anything differently. I am concerned that there be a feeling that silence be regarded as acquiescence in such comments, and I feel constrained to say that I think that Kathy Cudlipp, Curtis Moore, and Phil Cummings, the staff members mentioned specifically by the Senator from Wyoming, and others are very capable, effective staff members. I don't think they've done anything deserving of censure here. They have presented a staff draft which includes provisions which the Senator from Wyoming is opposed to, and he is certainly entitled to that opposition. But I would point out that the particular point that was the subject of discussion prior to that was included in the bill that was reported out of this committee by a vote of 11 to 1 in 1980. Eleven members of this committee voted for these pro-

visions; only one member, the Senator from Wyoming, voted against them. For that, as I said, he's entitled to do that.

But I hardly think they can qualify as some kind of things pulled out of thin air by these overly aggressive staff members. I happen to strongly favor the creation of a Federal cause of action; I understand the Senator disagrees with that, and I respect his disagreement. It is a very difficult area. I happen to favor, as an alternative, some other mechanism for victim compensation, and I understand that he disagrees with that as well. But I think if we have disagreements, they are between the members of the committee and while I respect the Senator's view to which he's entitled regarding the staff, I just think that at some point somebody here has to say that there is a contrary point of view regarding the staff. I hold that contrary point of view, and I feel constrained to express it under the circumstances.

Senator SIMPSON. Mr. Chairman.

Senator STAFFORD. Senator Simpson.

Senator SIMPSON. I do respect your views, George Mitchell and Jennings Randolph, indeed. And there is no contrary view about this staff. They are the sharpest people I have come across in my time in Washington. They are literally "whales in the pond" of other staffs with what they have and how they have mastered their craft.

What I do say is that in the mastery of the craft, they have held strongly to positions that have never changed over the course of the 5½ years that I have been here, and have never been adjusted or softened or ameliorated, and that causes me concern because our task here is Superfund and reauthorizing it. Our task is not bringing back things that, even in the raw emotion of the first Superfund, we were able to keep out because we thought they would not be workable. And now as things are working, they continue to come back in. That's what I'm saying.

There's been no one more gracious or generous to me than Jennings Randolph when he chaired this committee, and no one more patient with me than Senator Stafford as he listens to me express myself. But I'm not one of those kind that just sit in public and make cracks about a very efficient and effective staff; I visit with those people. Curtis Moore and I have had some rich discussions.

I think it's a tie, because one time he said: "Let me tell you what I think about what you're saying about that, so that you will hear me." And it was good, just the two of us.

So that's the kind of communication I like, and Curtis and I will visit again. And I'm going to visit with these three staff members, and then I'm going to name two others; I name them because of their capabilities, not to censure them. And I need to visit with those three people, and I need to visit with Jon Jewett and Brent Erikson to find out if there's something going on with the five of them that's driving me goofy, because that may be happening, too. But I'm fed material from my crew that are not correct in interpreting what's coming.

So the five of them are going to sit with me, and nobody else; and it will be good, because I will say to them, and they know this, that I'm not out to can anybody. And that's the difference between this Senator and a lot of them because they'll nail some poor staff

member and they'll go to their other member and they'll say: "I want you to zap that guy." And I never do that. I zap them myself.

And that's the important thing for me, and these people are remarkable. Without them we would move nothing. But we don't get much moved because we hang tough with stuff which is not going to receive the general support of 100 Members. It will receive the support here, but it doesn't deal with a western alternative sometimes, or a southwest alternative or a northeast alternative. Those are things that I am saying. All I want to do is see the drafts as they are proposed by this capable staff, and I have trouble sometimes there. They are not circulated appropriately so that I can wrap my head around it and deal with it honestly. And that's what I need if I am to be a productive member of this committee.

So those communications with staff will be increased, and they have in the past. But what we're up to is reauthorization of Superfund; we're not up to these extraneous and other efforts to back former proposals.

I thank the chairman.

Senator RANDOLPH. Will you yield to me, Alan?

Senator SIMPSON. Indeed.

Senator RANDOLPH. Perhaps in mentioning this recent measure which we passed from the committee which you chair, I did not use the words "agent orange." That was the subject matter, and I think the record should show it because you had mentioned it in your comments today. I came back to that situation as something that was very troubling within the committee, agent orange and how we should attempt to deal with it at, let's say, this late date for a certain group of people.

But finally, there was an agreement and I supported it and was happy to join as a sponsor of it.

Senator SIMPSON. Mr. Chairman, three of you here on this committee are members of the Veterans' Committee and were of splendid effort with me in resolving agent orange: Senator Mitchell, you, and Senator Stafford, all members of the Senate Veterans' Affairs Committee.

Senator MITCHELL. I would like to just make one minor dissent with Senator Simpson's comment.

The provisions to which you referred were dropped from the 1980 version not as the result of any considered judgment by the Members of the Senate, but, as you will recall very well from those lengthy meetings we had down in the leader's office under the naked threat of filibuster by opponents to the legislation, the overwhelming majority of the Members of the Senate never had an opportunity to express their judgment on these provisions. And so I don't think it is an appropriate conclusion that there was any judgment by the Senate that they were unworkable.

The only body that expressed a judgment on these provisions was this committee, which voted 11 to 1 for them, and then since it was very late in a lameduck session, we weren't able to get it up for a vote.

Senator SIMPSON. Mr. Chairman, I should have made myself more clear. I was speaking of the 1979 negotiations on Superfund. I remember the discussions we had on your amendment and the other propositions.

Senator MITCHELL. I thank the Senator.

Senator STAFFORD. Well, gentlemen, now that we've discussed briefly the affairs of two different committees, maybe we should get to the Superfund.

Senator LAUTENBERG. If I might, Mr. Chairman.

Senator STAFFORD. Senator Lautenberg.

Senator LAUTENBERG. I have the blessing of ignorance here; I speak without knowledge, and therefore am very fortunate in not having been here and suffering, by will, the forbearance and patience of my colleague from Wyoming. I'm still learning. I find some of the guidelines issued here, some of the language very helpful in understanding not only what's gone on in the past, but some of the problems that we face in the future. I would like a copy of the book of love poems by Senator Simpson from Wyoming. You manifest your affection in strange and diverse ways.

I am glad that I'm not a subject of your affection.

But I may be later in the day when we get to drunk driving.

I must say that in this short tenure of mine on this committee, staff has been very helpful to me and I do appreciate it. Given the chance, maybe I'll learn more about their bad habits; but so far, they have been most helpful to me.

Mr. Chairman, are we going to continue?

Senator STAFFORD. Well, the Chair will be at the disposition of the wishes of the members of the committee at this point. We have gone about 25 minutes past the time the Chair had in mind. I don't know what Mr. Thomas' commitments for the afternoon might be. Are we beginning to infringe on your afternoon appointments?

Mr. THOMAS. I have a full afternoon of appointments, but you certainly take precedence.

Senator STAFFORD. All right.

I would encourage the members who are still here to put questions in writing as I have, especially those that are complicated and need a chance for Mr. Thomas to reflect before he responds.

Senator LAUTENBERG. Respectfully acknowledged, Mr. Chairman. I just wanted to ask one more question, and that had to do with the ability of the EPA to handle more than the $640 million worth of funding for the year 1985. Did the Administrator request something over $750 million for the same fiscal year?

Mr. THOMAS. It was a little less than that, I believe, Senator. It was about $100 million more than the $640 million, I think, when we originally made our request as a part of our budget development process with OMB. A good part of that had to do with early estimates of funding requirements in the dioxin area. And as we gained far more experience now than we had well over 1 year ago when we were putting that together, we've ended that we feel that the $640 million is the appropriate level.

Senator LAUTENBERG. And that would be with using as much outside professional assistance as we can get?

Mr. THOMAS. A substantial portion of that is for the expertise that we require. Additionally, clearly over and above the $640 million is the projections that we make for responsible party cleanup. And a good portion of the $640 million, for instance, supports our attorneys and our expert witnesses required to both recoup costs we've spent, as well as obtain costs. For instance, this year we've

already obtained over $125 million in cleanup from responsible parties. It's not reflected in this year's appropriation.

Senator LAUTENBERG. So certainly cost credits for the States might expedite that process, would you think?

Mr. THOMAS. As we discussed last time, I think the cost credit issue is one that could be addressed.

Senator LAUTENBERG. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Lautenberg.

Senator Mitchell?

Senator MITCHELL. Mr. Chairman, in accordance with your suggestion, I will submit further questions in writing to Mr. Thomas.

I would like to inquire, since Mr. Thomas understandably and with justification generally did not comment on the subject area that I raised—that is, of victim compensation, either through a Federal cause of action or through an alternative compensation scheme regarding the fund—whether it would be possible to take Mr. Thomas up on his offer to either have a hearing with Mr. Barnes and other interested persons present, or at the very least, a meeting between the appropriate persons and staff and interested Senators. I am personally very concerned about this area and would intend to pursue it further in the committee, and I think it would be useful to have the comments and views of the Agency and other interested parties.

Mr. THOMAS. Senator, we'd certainly be supportive of participating with you in that kind of session, either in testimony for the full committee or in any kind of session you would like. I discussed this with Jim Barnes last week; he regretted very much he couldn't be here today, and we very much would like the opportunity to discuss the issues with you.

Senator STAFFORD. Without objection, we'll see if we can't get those views placed on the record.

Senator MITCHELL. I would appreciate, Mr. Chairman, if it could be done in a manner that would give us an opportunity to examine the views and question the persons expressing the views about them rather than simply soliciting the views. I understand that the hearing may be tight—if we could have a hearing, I think that would be the best way to do it. If not, perhaps some way to schedule a meeting between the Agency personnel and interested Members of the Senate. I am interested in working on that.

Senator STAFFORD. The Chair will take that under advisement.

Senator MITCHELL. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you, Senator Mitchell.

The Chair wants to express his appreciation to all members and especially to you, Mr. Thomas, and your colleagues who came up here. We thought that doing it this morning, we might not have any attendees; but the Chair is gratified to see that a substantial number of the members of the committee have been present this morning. They obviously have a deep interest in the question of what to do about Superfund. So the Chair is pleased with the way the morning has gone, and I think the airing of some differences about one or two issues has been healthy for the committee, also.

At the present time, we will say that the committee stands adjourned.

[Whereupon, at 12:30 p.m., the committee was adjourned.]

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[The letter from the 301(e) study group, previously referred to by Senator Simpson, and additional letters on the subject follow:]

JUNE 19, 1984.

Hon. ROBERT T. STAFFORD,
U.S. Senate, Senate Hart Building,
Washington, DC.

DEAR SENATOR STAFFORD: As members of the Superfund Section 301(e) Study Group, we have had brought to our attention the statement of several recent witnesses before your Committee that unfortunately misperceive or mischaracterize the 301(e) Report. We believe that we have an obligation as participants in that Study to call them to the Committee's attention and to avoid any misunderstanding of the Group's recommendations and report.

A. NO JUDICIAL PRESUMPTION

Two witnesses testified that the Report endorsed or implied that statutory presumptions in the Tier Two (tort) system equivalent to those recommended in the Tier One (administrative) system were desirable. "The 301(e) study group advocated [a presumption] mechanism to see the plaintiff's burden of proof in both the adminstrative compensation and in the courts." Statement of Janet S. Hathaway, Staff Attorney, Public Citizen's Congress Watch, May 16, 1984, page 26. Jane L. Bloom of NRDC stated:

"We favor a presumption which would shift the burden to the defendant to disprove causation if the plaintiff could make a showing comparable to that prescribed for the administrative scheme, described above. The institution of a similar presumption has been recommended in the § 301(e) Report, which concluded that difficulties in proving causation can preclude meritorious cases from ever being heard by a jury.[1]

This conclusion is erroneous. Indeed, the Study Group Report expressly explains why the Group recommended that the presumptions recommended for an adminsitrative compensation scheme ("Tier One") were inappropriate for use in court proceedings ("Tier Two"). The Report states:

"(d) Rejection of Tier One Presumption; Use of Toxic Substance Documents."

The Study Group concluded that the Tier One rebuttable presumptions were not appropriate for use on Tier Two.[2]

The Group discussed whether or not to reccomend that the presumption apply in any subsequent subrogation proceedings to reimburse the fund but came to no conclusion.

B. CLASS ACTIONS NOT RECOMMENDED

The testimony of Janet S. Hathaway, for Public Citizen's Congress Watch, implies that the Superfund Study Group endorsed the use of class actions in toxic tort cases. While some of us favored such use in many cases, it is clear that the majority of the Superfund Study Group did not. Janet Hathaway stated that:

"[I]t is still true as the 301(e) group reported in 1982, '[A] denial of plaintiff combinations in the bringing of such suits in effect denies a plaintiff the opportunity to bring the action at all, unless his claim is exceptionally large.'

"To keep costs of suits at levels which will not preclude virtually all deserving plaintiffs from pursuing their tort remedies, class action certification should be granted where there are numerous plaintiffs with substantially similar issues of fact or law." [pp. 24-25]

In fact, however, the Superfund § 301(e) Report expressly recommends against the use of class actions in the area of the Report's central interest—personal injuries:

"The majority of the Group expressed the view that the use of class actions for mass torts is not appropriate, [because a plaintiff with] knowledge of the action might be bound by its outcome, and in part because of highly individual factors affecting personal injuries. A smaller number of members of the Study Group were of the opinion that class action approaches could be usefully adapted to mass tort actions." Report, at 261 (top), 246 (bottom).

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[1] Jane L. Bloom, Natural Resources Defense Council, Inc., page 16.

[2] Superfund § 301(e) Report, pp. 263-265 (top), 248-250 (bottom). [References are to the Environment Committee's page numbering of the Report which appear at the top of the page and to the original page numbering at the bottom.]

C. STATUTE OF LIMITATIONS

The Janet Hathaway testimony also implies that the Superfund Study Group had considered the "fear of cancer" and said:

"[I]n some states, toxic tort plaintiffs are being forced to file suit soon after exposure, bringing claims for acute effects and "reasonable fear of cancer." If they wait until toxic-induced cancer is in fact diagnosed, their right to sue will have expired. The 301(e) study has illuminated this pernicious problem and recommended reform." [P. 22.]

The fact is that none of us raised the "reasonable fear of cancer" point—a concept which had not been recognized in any jurisdiction at the time of our discussions.[3]

The Study group did recommend that States adopt a liberal discovery rule to start the running of a limitations period only after the plaintiff discovered or should have discovered his disease and its cause. Superfund § 301(e) Report, at 261 (top), 246 (bottom). This is because, as the Report states, "With long latency periods, a rule which starts the running of the statute from the time of exposure will defeat most actions before the plaintiff knows of his injury." Superfund § 301(e) Report, at 43(top) and 28(bottom). But the Superfund Study Group's analysis and recommendation did not address any potential "fear of cancer" cause of action. A review of the minutes of our meeting shows no mention of that term or its equivalent.

D. NO FEDERAL CAUSE OF ACTION

Janet Hathaway also testified that the Superfund Study Group favored a federal toxic tort cause of action. She stated:

"A 1980 CRS Report concluded, "In light of the information contained in this report, it would be difficult to dispute the widely held view that existing state law is not an efficient, effective or even predictable mechanism for recovering compensation for toxic substance pollution." The 301(e) study and subsequent law review articles have reiterated this point . . . The most comprehensive and swiftest method of reforming the judicial system . . . is by establishing a federal cause of action. * * *" [Pp. 12–14.]

The Superfund Study Group recommendations for reform of judicial tort rules were directed solely to the States. The Group recommended a nationwide administrative system but, each member for his own reasons, did not recommend a federal toxic tort cause of action.

E. SCOPE OF THE PUBLIC HEALTH PROBLEM

Jane L. Bloom testified that:

"The seminal 1982 Report to Congress, mandated under § 301(e) of CERCLA, concluded that uncounted and potentially numerous individuals may fall victim to diseases, disability or death as a result of exposure to toxic substances at waste sites." [P. 12.]

This statement may be read to imply that the Study Group made a factual inquiry and finding as to the scope of the public health problem associated with such sites. This is not the case.

The Study Group Report states:

"An effort has been made to obtain some data or even estimates on the number of persons exposed and at risk of various injury or disease. Although numerous sources were consulted, little data could be obtained." [Superfund § 301(e) Report, at 31(top), 16(bottom.)

Our Report, at pages 30 to 33 (top), 15 to 18 (bottom), makes clear that in the absence of quantifiable data, we nevertheless regard the general problems as substantial and were obligated to proceed on the assumption that a problem existed in this area and we were to assess the state of law and its operation in the light of that assumption.

The Superfund Study Group's Report was a compromise, but it was an honest compromise among varying strongly held perspectives. In large measure, it reflected a consensus of its members. Its use should accurately reflect what is actually written in the Report or the separate statement of individual members. Inaccurate citations of its conclusions are unfair to the twelve members who devoted a consider-

[3] More recently the U.S. Court of Appeals for the Fifth Circuit held that fear of cancer is not an independent cause of action and does not start the statute of limitations running on an individual's claims. See *Jackson* v. *Johns-Manville*, 727 F.2d 506 (5th Cir. 1984) and *Adams* v. *Johns Manville*, 727 F.2d 533 (5th Cir. March 23, 1984).

able amount of time and effort over a year to work out a fairly sensible set of recommendations in a difficult policy area.

Judge Breitel has asked us to indicate that he agrees with the above. We understand that Weyman Lundquist is submitting his views to you separately. We were unable to reach Attorney General Rufus Edmisten.

Sincerely yours,

FREDERICK R. ANDERSON.
FREDERICK M. BARON.
GEORGE C. FREEMAN, Jr.
FRANK P. GRAD.
NORMAN J. LANDAU.
JEFFREY O'CONNELL.
WARREN R. SPANNAUS.
JAMES R. ZAZZALI.

PublicCitizen

Congress Watch • Critical Mass Energy Project • Health Research Group • Litigation Group • Tax Reform Group

June 27, 1984

Honorable Robert T. Stafford
United States Senate
133 Hart Office Building
Washington, D.C. 20510

Dear Senator Stafford:

At a committee hearing held Monday, June 25, on the reauthorization of the Comprehensive Environmental Response, Compensation and Liability Act ("Superfund") Act of 1980, Senator Simpson mentioned me by name and referred to a letter of June 19th from certain members of the 301(e) Superfund study group. The letter asserted that my testimony before the Committee on May 16, 1984 "misperceived or mischaracterized" the 301(e) Report. I presented testimony which was, to the best of my knowledge, a fair and accurate account of the issues and the positions taken by Public Citizen and other interested groups. I believe the letter unjustly characterizes my testimony. Because I only learned of the allegations on Monday, I would appreciate the inclusion of this letter in the hearing record to set the matter straight.

My testimony before the Committee analyzed many of the controversial issues relating to the reauthorization of Superfund, including some discussion of the 301(e) study group's report. I referred to the 301(e) study at several points, but the contexts reveal that by doing so, I did not suggest that the position of Public Citizen (or any other group supporting victims' compensation) is coincident with that of the 301(e) group.

I wish to respond to several specific allegations made in the June 19th letter.

1. The letter claimed that I testified that "the Superfund Study Group favored a federal toxic tort cause of action." I did not do so. I am and was aware that the 301(e) group made no such recommendation. To the contrary, my testimony states, "The [301(e)] study proposed a two-tiered system, consisting of an administrative system (geared toward providing swift but limited compensation for claims small enough to make court remedies inappropriate) and state court actions, modified to ease barriers victims currently face."

(Testimony of May 16, 1984, page 11.)

Public Citizen's position is that "the most comprehensive and swiftest method of reforming the judicial system to make it more fair for the toxic tort plaintiff is by establishing a federal cause of action which would be not preemptive of other state or federal tort remedies...." (Page 14.) I neither stated nor "implied" that the 301(e) study agreed. The letter juxtaposes statements separated by several pages of intervening text, and does not fairly represent the context of my remarks.

2. The June 19th letter further states, "The testimony of Janet S. Hathaway, for Public Citizen's Congress Watch, implies that the Superfund Study Group endorsed the use of class actions in toxic tort cases." Once again, I neither made such a statement nor did I "imply" it. On page 24 of my formal testimony, I wrote that the 301(e) study group's report had noted that the absence of class actions effectively denies plaintiffs with modest claims an opportunity to bring suit. (See the 301(e) study, Part I, page 257.) In a subsequent paragraph, I recommended expansion of class action certification where there are numerous plaintiffs with substantially similar issues of fact or law. My recommendation, on behalf of Public Citizen, did not "imply" any similar recommendation by the 301(e) group.

3. The letter states, "The Janet Hathaway testimony also implies that the Superfund Study Group had considered the 'fear of cancer'...." I did not state or imply that fear of cancer was considered by the study group. Rather, the point of my statements at page 22 is that statutes of limitations in some states expire before plaintiffs' injuries have become manifest or before plaintiffs have reason to know of the causal link between toxics exposure and the injuries suffered. The 301(e) study did, indeed, take note of such problems posed by such statutes of limitations and recommended a liberal "discovery rule" statute of limitations. (See 301(e) study, ninth recommendation, Part I, page 255 et seq.) Because of unfair statutes of limitation, some attorneys have tried to meet the filing limitation while protecting their clients' interests by bringing suit for acute effects and reasonable fear of cancer shortly after dangerous exposure.

4. Public Citizen recommends that persons who can show toxic exposure and injury of a kind which can be caused by such an exposure should have an opportunity to present their case before a jury or fact-finder. The

"presumption" on the issue of causation was discussed by the 301(e) study group, but as the letter of June 19th states, the presumption was recommended only for the administrative compensation system. An early draft of my testimony incorrectly stated that the recommendation also applied to the court remedy. The mistake was corrected on the day of the hearing at which I testified, and corrected versions were sent to the Committee and to all members of the public who requested testimony on or after May 16th. The corrected testimony, which accompanies this letter, states, "The 301(e) study group advocated such a mechanism [a presumption] to ease the plaintiff's burden of proof in the administrative compensation system." (Page 26.) A footnote at that point further explains, "The 301(e) study group stated that the presumption in tort actions should be 'left to the development of the law in the several states.' Ibid., Part I, page 260."

I request that the Committee include this letter in the hearing record so that I have an opportunity to respond to Senator Simpson's remarks at the June 25th hearing.

It would be highly unfortunate if the misleading June 19th letter could divert attention from the real and pressing need of toxics-exposed victims for enhanced remedies. I appreciate the Committee's willingness to evaluate this controversial but nonetheless essential aspect of the Superfund reauthorization. I will be happy to provide the Committee with any additional information.

Sincerely,

Janet S. Hathaway
Staff Attorney
Public Citizen's Congress Watch

Enclosure: Testimony of May 16, 1984 *

cc: Members of the Senate Committee on the Environment and Public Works

cc: Members of the 301(e) Study Group

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*See the proceedings of May 16, 1984, p. 307, for the testimony referred to.

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July 13, 1984

Honorable Robert T. Stafford
Chairman
Committee on Environment and
Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Stafford:

It has come to our attention that a letter dated June 19, 1984, signed by members of the Superfund Section 301(e) Study Group was received by the Committee on Environment and Public Works. The letter alleges that NRDC's testimony before the Committee on May 16, 1984 "misperceived or mischaracterized" the 301(e) Report, and charges that such "inaccurate citations of its conclusions are unfair" to members of the Study Group. Despite its strong criticism of our testimony, the Study Group neglected to send this letter to NRDC, and we learned of its contents only last week.

NRDC strongly objects to the Study Group's mischaracterization of our testimony and its assertion that we have somehow misused the 301(e) Report. The letter severely distorts NRDC's passing references to the Study Group's Report. Far from "misperceiving or mischaracterizing" the Report, NRDC's testimony accurately represents the contents of the Report, and indeed, supports many of its conclusions and recommendations.

At the May 16th Committee hearing, NRDC presented the organization's position that Superfund needs to be amended to provide improved mechanisms for compensating victims of toxic exposure. NRDC made a number of specific recommendations for reform, including provision of an administrative compensation scheme, similar though not identical to the one recommended by the Study Group. Our testimony clearly presents NRDC's position on Superfund reauthorization and our specific recommendations for reform as our own, and neither states nor implies that NRDC's views are shared by the Study Group.

Our testimony appropriately refers to the 301(e) Study Group's report at two points. First, we restate the Report's observation that an unknown but potentially significant number of

persons may be injured due to exposure to hazardous substances. Second, in discussing NRDC's recommendation that a set of presumptions be provided to lighten plaintiffs' burden of proof in court, we refer in passing to the Study Group's endorsement of a similar set of presumptions in favor of claimants under the proposed administrative compensation scheme.

The Study Group letter, however, distorts the plain meaning and intention of both of these references to the Report in our testimony. Our testimony states that the 301(e) Report "concluded that uncounted and potentially numerous individuals may fall victim to diseases, disability or death as a result of exposure to toxic substances at waste sites." The letter contends that "[t]his statement may be read to imply that the Study Group made a factual inquiry and finding as to the scope of the public health problem associated with such sites." This charge is absurd on its face. Our testimony, as quoted above, neither states nor "implies" that the Study Group made a "factual inquiry or finding." To the contrary, the wording of our statement accurately presents both the Study Group's observation that there is uncertainty with respect to both the actual numbers of persons at risk and the likelihood of such risks materializing, and its statement that potentially significiant numbers of persons may be at risk due to exposure to hazardous wastes.*

Indeed, the letter to the Committee only confirms the accuracy of NRDC's statement. The letter acknowledges that the Report "makes clear that in the absence of quantifiable data, we nevertheless regard the general problems as substantial and were obligated to proceed on the assumption that a problem existed in this area and we were to assess the state of the law and its operation in light of that assumption."

The letter further distorts our statement with respect to presumptions. The letter contends that NRDC "testified that the Report endorsed or implied that statutory presumptions in the Tier Two (tort) system equivalent to those recommended in the Tier One (administrative) system were desirable." To the

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* The Report states:
Experience with occupational exposures to hazardous chemicals and with such substances as asbestos, Agent Orange, kepone, PCB, PBB, coal dust and DES, indicates a substantial possibility of large numbers of latent injuries and future claims...In order to protect against substantial, though uncertain risks of injury from hazardous waste exposure, policy makers, as in other field of environmental regulation, will need to make decisions on an assessment of risks that are largely unquantified." (301(e) Report, pp.17-18, bottom) (emphasis added).

contrary, NRDC stated its own view that a presumption "comparable to that prescribed for the administrative scheme" was desirable, and noted that the 301(e) Study Group had recommended "a similar presumption." NRDC's observation that the Study Group had endorsed a similar presumption clearly referred to the Group's recommendation with respect to the administrative scheme. Our remarks were not intended to imply that the Report endorsed the use of such a presumption in the judicial setting. In our view, the Report's failure both to recognize the appropriateness of such presumptions for toxic tort suits and to recommend creation of a federal cause of action providing these presumptions are limitations of the 301(e) study.

Far from righting any wrong done to the Study Group, the letter inexplicably discredits the efforts of the 301(e) panel to develop recommendations to obtain adequate remedies for persons injured by hazardous substances. Moreover, the letter unjustifiably attacks the legitimate efforts of NRDC and other groups to achieve that goal through mechanisms that in some respects differ from those supported by the Study Group.

We also have reason to believe that some, if not most of the panel members who signed the letter to the Committee, were unaware that the letter misrepresented our use of the 301(e) report. In discussing the letter with several members of the Study Group, we learned that the letter's author, George Freeman, represented to them that our testimony misperceived the Group's recommendations. These members stated to us that in signing the letter, they wished only to clarify the Group's precise recommendations presented in the Report. It was not their intention to discredit the efforts of NRDC and other groups to support reauthorization of an expanded Superfund. These members further assured us that the Study Group shared the goal of providing enhanced legal remedies to persons injured by hazardous waste.

We would appreciate your entering NRDC's response to the Study Group's letter in the Committee record of the May 16, 1984 Superfund hearing, to enable us to correct the misimpressions of NRDC's position on Superfund reauthorization and of our reading of the 301(e) report, that have been generated by the Study Group letter.

Sincerely,

Jane L. Bloom

Jane L. Bloom
Senior Project Attorney

JB:cp

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

TUESDAY, JULY 31, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The committee met, pursuant to notice, at 10:25 a.m., in room SD-406, Dirksen Senate Office Building, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Randolph, Lautenberg, Burdick, Mitchell, Simpson, Humphrey, Stafford, Durenberger, and Domenici.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Good morning. The Committee on Environment and Public Works will please come to order.

In the 3½ years I have been chairman of this committee I don't believe I've ever been 25 minutes late for a meeting. It's the first time it has happened, and I think I owe an explanation to the witnesses and to our guests who are here this morning.

I can tell you that our delay in getting here has been due to the fact that Senator Randolph and myself, Senator Bentsen and Senator Symms, who are responsible for the highway legislation that this committee is generating, met at 9:30 and did not conclude our meeting on this year's highway bill until 5 minutes ago. Since that is the next bill that is coming out of this committee to the floor, we felt that had to take precedence until we could make sure that the four of us were in a uniform position before the bill reaches the floor. So Senator Randolph and I have been working at committee work since 9:30, but we apologize for the fact that it delayed the beginning of this meeting this morning, which is a very important one.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Senator Randolph.

Senator RANDOLPH. I want the record to show you always tell the truth.

Senator STAFFORD. Thank you. Thank you very much, Senator. Maybe I should have had you say that, if you were willing to, this morning at 7 o'clock on the radio.

Senator Mitchell wants the record to show also that he has already been here and now has a markup in the Finance Committee, and is therefore having to divide his time between this committee and the other one, but he will be here a little bit later.

Most of you in this room are aware that the Environment and Public Works Committee is moving to report to the Senate amendments to the so-called Superfund law. It is my belief that action to extend this law is imperative this year if we are to attain the momentum the Superfund cleanup program was meant to achieve. This committee has held 6 days of Superfund oversight hearings during April, May, and June. Since then, a set of proposals for amending the law has been widely circulated for comments. Today Senator Randolph and I will introduce legislation to extend and improve the Superfund program. (See p. 1101.)

Two days of markup are scheduled this week, and it is my hope and expectation that this committee will complete action on the bill by the end of next week. It is essential that we do so since, at the end of next week, the committee and the Congress will be going out of session until early September.

The session this morning is devoted to hearing from seven knowledgeable witnesses on the question of establishing a Federal cause of action under Superfund. The committee heard witnesses on this issue during its oversight hearing, but at that time no specific proposals had been put forward. Several members stated an interest in having another opportunity to examine this issue, and today's hearing is intended to provide that opportunity.

I'd like to ask all of our witnesses to be ready at the table because it is the chairman's intent, if it is agreeable with members, to have all of the witnesses make their initial statement before questioning begins. I believe each witness has been asked to limit his or her oral statements to no more than 10 minutes; and, of course, any written statements that have been supplied to the committee—and I see we have a number—will be made a part of the record.

Senator Randolph, do you have any opening statement?

Senator RANDOLPH. I think I'd best not at this time. Thank you, Mr. Chairman.

Senator STAFFORD. Thank you very much.

Senator Domenici.

Senator DOMENICI. Nothing, Mr. Chairman.

Senator STAFFORD. Senator Lautenberg.

Senator LAUTENBERG. Just looking forward, Mr. Chairman, to the testimony of the witnesses.

Senator STAFFORD. All right.

The first panel will consist of Mr. Richard Willard, who is the Acting Assistant Attorney General, Civil Division, Department of Justice here in Washington. I can see I may be apologizing for pronunciation. Mr. Irving P. Margulies—am I anywhere near correct?

Mr. MARGULIES. That's right, Senator.

Senator STAFFORD. General counsel, Department of Commerce here in Washington; Hubert Humphrey III, attorney general, State of Minnesota; Mr. James Payne, attorney, Pepin, Dayton, Herman, Graham & Getts of Minneapolis, MN; Sheila Birnbaum, attorney, Skadden, Arps, Slate, Meagher & Flom, and professor of law at

NYU; Mr. George C. Freeman, Jr., attorney, Hunton & Williams, Richmond, and Mr. A. Stephens Clay, attorney, Kilpatrick & Cody, Atlanta, GA. And I note that Ms. Birnbaum will be testifying on behalf of the American Insurance Association and is accompanied by Leslie Cheek III, vice president, Federal affairs, Crum & Forster Insurance Co.

I hope I have everybody correctly designated. We would propose to go in the order, ladies and gentlemen, in which you are listed, so we would be going from left to right, which is the way people on my side of the aisle seem to move anyway.

A few of us were invited yesterday to move to the left and stay there.

We didn't take the invitation.

Mr. Willard, that means you are first.

STATEMENT OF RICHARD K. WILLARD, ACTING ASSISTANT ATTORNEY GENERAL, CIVIL DIVISION, DEPARTMENT OF JUSTICE

Mr. WILLARD. Thank you, Mr. Chairman. I am Richard Willard, Acting Assistant Attorney General in charge of the Civil Division at the Justice Department, and I am pleased to be here today to discuss the creation of a Federal cause of action for persons harmed by hazardous substances as proposed in H.R. 5640, the Superfund Reauthorization Act recently reported by the House Committee on Energy and Commerce and in the staff draft reauthorization bill recently released by your staff.

Since my prepared statement is being made a part of the record, Mr. Chairman, I propose to summarize it briefly.

Senator STAFFORD. That would be fine.

Mr. WILLARD. The Department of Justice does have serious reservations about the creation of a Federal cause of action in this area. The law defining liability for exposure to toxic substances has rapidly developed in the last decade. The legal principles that are currently being developed by the courts to compensate victims of such exposure apply to cases involving not only hazardous wastes, but also radiation exposure, occupational diseases, pesticide and herbicide exposure, and other tort claims involving allegations of chronic, long-latency diseases.

Passage of a Federal statutory cause of action could tend to freeze the efforts of the courts and the States to develop new, more efficient ways to provide compensation. It is our view that this development of tort remedies in the courts should be allowed to proceed without the imposition of a Federal statutory cause of action so that the effects in terms of recoveries to injured parties, the costs of the use of the tort system, and the economic effects of various theories of liability can be more fully understood. At this time our knowledge is simply too limited to enable us to predict the impact of this proposed legislation. We note that the section 301(e) study group unanimously chose not to recommend the establishment of a Federal cause of action for toxic exposure.

We have several specific comments on the Federal cause of action provision that are contained in either the House bill or the staff draft.

First, the House bill applies retroactively to damages incurred in the last 10 years if claims are filed within 3 years of enactment. This sort of retroactivity, when combined with the use of strict, joint and several liability, raises significant fairness questions, especially since it may be difficult to obtain insurance coverage for such retroactive liability.

Second, in addition to recovery for personal injury, both the House and the Senate draft bills permit recovery for injury to property, including "diminution of value," as well as subjective elements of recovery such as pain and suffering and punitive damages.

The concept of these elements of damages could greatly expand the liability imposed under this statute without much of the money going to those who have actually suffered real loss or damages from injury due to exposure to hazardous substances.

Third, there is some doubt under either bill whether there could be recovery for exposure for workers in their occupations who had been unable to recover through workers' compensation systems, and this point should be clarified in any legislation.

Fourth, the Senate draft bill alters significantly the Federal rules of evidence with regard to admissibility of evidence, and also changes the Federal rules of civil procedure with regard to the maintenance of class actions. For example, the draft bill we were provided requires the admission in court of epidemiological studies without regard to the size of the sample. We do not believe there is a basis for tampering with the normal Federal rules of evidence and procedure for this particular kind of litigation.

Fifth and finally, the legislation may be interpreted to permit suits against the Federal Government outside the carefully-considered framework of the Federal Tort Claims Act. This would be in addition to existing liability through third party claims under the Federal Tort Claims Act or under implied contract theories. That this liability alone is significant is illustrated by the experience we have had on the ongoing asbestos litigation where the Government's exposure to just one defendant, Johns-Manville, has been estimated to run as high as $16.5 billion.

If this legislation permits suits against the United States, it would, for the first time, make the United States liable under a strict liability theory. In addition, the United States could be jointly and severally liable, thus making the taxpayers of the United States responsible for paying for the deeds of others in the context of court litigation. Considering that the United States is the ultimate "deep pocket," this litigation may constitute a severe drain on the Treasury.

We believe that the Congress must carefully consider the broader societal implications of the creation of a Federal cause of action in this area. As we have discussed in our prepared statement, the tort law in this area is rapidly evolving to meet new situations. At the same time, it is becoming apparent that there are significant transaction costs to the use of the tort system to compensate victims of exposure to hazardous substances. The Rand Corp. study of the costs of asbestos litigation showed that, of every dollar paid by asbestos manufacturers and insurers in judgments to injured parties, approximately two-thirds was drained away in attorneys' fees and

litigation costs. This suggests that the proposal will not necessarily provide the intended assistance but, rather, will benefit primarily lawyers and others involved in the litigation process.

Moreover, Congress is shifting to the courts questions involving the allocation of vast resources with only very general guidelines as to who is to benefit from this shift of resources. In view of the finite resources available to deal with the many problems society has, we believe that Congress should give far more detailed consideration to who actually should receive benefits, and how these benefits can best be distributed without consuming two-thirds of the benefits in transaction costs.

Finally, as this committee is aware, this legislation raises many significant issues in addition to the Federal cause of action. The Department of Justice, through its Lands and Natural Resources Division, plays a major role in the enforcement of the Superfund Act. We have prepared a report on the House bill addressing these issues and can make it available to this committee. In addition we will be reviewing any action of this committee and, at your request, Mr. Chairman, we would be pleased to submit a report reflecting our analysis to the committee.

Senator STAFFORD. Thank you very much, Mr. Willard. I won't interrupt the flow of testimony here because we have decided to go with all of the witnesses first, and then get to the questions. But I would say that some of the points you addressed have, I think, been taken care of in the legislation which Senator Randolph and I are offering today as a change in the bill that you have had a chance to examine. You might have in mind—we hope you will examine the new product which, unfortunately, is not yet available but will be very shortly.

Mr. Margulies, I guess you're next.

STATEMENT OF IRVING P. MARGULIES, GENERAL COUNSEL, DEPARTMENT OF COMMERCE

Mr. MARGULIES. Thank you very much.

It is a pleasure to be here to address to you the views of the Department of Commerce on title II of this bill. It is very unusual for a Commerce witness to appear before this committee.

I am here, essentially, to tell you that our view of this is affected by our view of where we now are, where America now is, in terms of a trading partner in world markets. We believe we are past the point where we can casually impose burdens on American industry that put them at a relative disadvantage to those who produce the same products in other parts of the world. We compete in world markets, and to the extent that we burden the producers of our goods they will not compete effectively in those markets. We have seen over the last 2 or 3 years the terrible burdens that those who produce our goods have in meeting very strong foreign competition. That is why we are here to talk about title II of this bill.

We see in title II the imposition, in almost a casual way, of burdens that will have effects that are not stated anywhere in reports that we can read, or have not been the subject of considered hearings—effects on producers, on distributers, or whole ranges of American industry, effects that are totally new. You have a new

class of people that may be subject to lawsuits; you have a new class of people identified that may have the right to bring lawsuits; you have damages that are in unknown amounts, and you have testimony from those who would provide certainty and insurance for those actors who may be liable, which tells you and tells us that the risks that would be imposed by this title are not insurable. They can't figure out what the cost would be.

We have two problems with this; the one I have alluded to is the fact that that will put us further at a disadvantage with respect to those in the world we compete with. The other is a process problem. The fact that this is going forward, that this title II goes forward with a presently announced version that none of us have yet seen and without the measured hearings and the record that would support the kind of massive burdens that this would impose on American producers and distributors is a problem for us.

The other problem that we have was well alluded to by Rich Willard, and it is the problem of the transaction costs that this kind of method of dealing with harm will always impose on society. We have no real attitude as to a congressional desire to identify a group that is injured, and then to assert that the sovereign will in some way—or someone—will bear the costs of injury and allocate that cost to our society. That's a public policy kind of judgment that Congress makes very well.

The problem here is that the device that is being suggested to assess those costs and then to allocate those costs throughout the society is, based on our experience, the least efficient, the most onerous in terms of the whole society—way of doing that. You are going to, on a case-by-case basis, assess costs. You don't know the different attitudes that will be expressed by different courts. You have no idea, going in up front, what the total costs are going to be. You have no idea; you're not prescribing a methodology for allocating those costs throughout the society. How they will be allocated, how they will be assessed, how they will be borne will be by accident of chance.

We hope that for these reasons you decide to go forward with the Superfund bill without title II. Take a long look at what you are doing in title II; pay some heed to the recommendations of the 301 Committee that was set up to address whether or not there should be a Federal cause of action, and proceed in this area in a much more careful fashion.

Thank you, Senator.

Senator STAFFORD. Thank you very much. I want to compliment the first two witnesses in accommodating us by summarizing their statements within less than 10 minutes. It always appeals to somebody from northern New England, reared in the tradition of Calvin Coolidge.

The next witness bears a most distinguished name and we are very happy to welcome attorney general of Minnesota to this meeting. We all greatly enjoyed our association with your father, and Mr. Attorney General, we are glad to welcome you here.

STATEMENT OF HUBERT H. HUMPHREY III, ATTORNEY GENERAL, STATE OF MINNESOTA

Mr. HUMPHREY. Thank you, Mr. Chairman, and members of the committee.

Senator BURDICK. Mr. Chairman.

Senator STAFFORD. Yes, indeed, Senator Burdick.

Senator BURDICK. I would like to join in welcoming the witness from Minnesota. You know that he works the east side of the river and I work the west side.

It is a pleasure to have you here.

Mr. HUMPHREY. Thank you, Mr. Chairman. Thank you, Senator.

Senator RANDOLPH. Mr. Chairman.

Senator STAFFORD. Senator Randolph.

Senator RANDOLPH. I simply wish to add that it has been my privilege, a cherished privilege, to serve in the Senate with many sons of fathers with whom I had also served, as in the case here of Senator Simpson—I served with his father; I served with the father of Quentin Burdick, and these are fond memories which, to me, are very real. We shall never forget the spirit of service of Hubert Humphrey in this body.

Senator STAFFORD. Thank you, Senator Randolph.

Mr. HUMPHREY. Mr. Chairman, on occasion it has been told to me that I have some of the same symptoms as other Humphreys, which means to be rather long-winded. I will try to curtail that for your purposes.

Mr. Chairman and members of the committee, it is indeed an honor to be able to testify before you. I would also like to introduce a member of my staff, Mr. Allen Williams, who is joining me today who is sitting just behind me. He is a former State senate counsel for the Agriculture and Natural Resources Committee to our State senate, and is the chief draftsperson for the Minnesota Environmental Response and Liability Act.

Mr. Chairman, I would like to describe the recent legislation which was adopted by the Minnesota Legislature which provides for a private cause of action in the area in which this committee is concerned today.

The Minnesota legislation, which culminated in the enactment of the Minnesota Environmental Response and Liability Act in 1983, grew out of our determination to address the problem of hazardous waste contamination in our State in a comprehensive manner. The legislation was designed to provide our State agencies with adequate legal and financial tools to get about the task of cleaning up all of the sites threatening our environment. But it was also designed to assure potential victims of hazardous waste exposure that the State was as much concerned about their needs as it was with restoring damaged natural resources.

The need to address the personal injury question arose from two sources. First of all, there were the potential victims of contamination whose numbers seemed to be continually rising in the early 1980's as more new sites were discovered. What were the citizens' rights to recover for injuries that they might suffer from exposure to these sites?

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Second, there were the people who were being asked to accept new hazardous waste facilities in their communities. Those who might be asked to open their communities to such facilities wanted to know who would answer for injuries if they occurred, despite the operating and design precautions that would be built into those new facilities.

The answer that the Government had to give to these questions from the public was, we can't be sure what the legal standards are going to be. In Minnesota, as in most States, there was no body of case law that spelled out the legal standards to be applied to personal injuries caused by exposure to hazardous waste. We in Minnesota studied the history and the trends in the common law related to hazardous waste injury problems. We found there was a clear trend toward strict liability.

We also found that all parties who shared responsibility for making decisions that led to the release of the waste into the environment would likely be required to answer for some portion of the injuries that occurred as a result of those decisions. Therefore, the legislature decided to create a statutory strict liability cause of action for third party injuries as a part of its comprehensive effort to deal with the effects of site contamination in our State.

Let me highlight for you the principal provisions of the Minnesota statutory cause of action. First of all, the act applies the standard of strict liability to injuries to persons and property caused by the release of hazardous waste substances into the environment. In doing this, the Minnesota law codifies, in the area of hazardous substance releases, the legal standard that has applied for many years for damage caused by inherently dangerous activities that were kept properly under control by those responsible for them. The new circumstances posed by the introduction of dangerous chemicals into the environment and the potential for disastrous effects on precious water supplies and the human life that this water sustains warrants application of a similar standard of strict liability to releases of hazardous waste.

Second, under the Minnesota Act, liability is joint and several with respect to those who in some way share responsibility for the release. However, the act also recognizes that it is not fair to hold every party that had anything to do all with disposing of hazardous substances legally accountable to pay damages for the release. The relationship of certain parties to the release of a substance and to the resulting injuries may be too tenuous to require that particular party to be liable for the injuries.

So, for example, Mr. Chairman, under the Minnesota law, innocent landowners and those who disposed of small quantities of waste are protected.

The third major provision of the Minnesota Act is a section related to proving the causal connection between exposure to a hazardous substance and a particular injury of disease. The Minnesota causation provision does not change the burden of proof of causation. Nor does it create an evidentiary presumption that favors the injured party. Instead, the law is largely—though not entirely—a restatement of the way that the common law would treat the causation question.

I might add that the Minnesota law did not open up the floodgates of litigation. We are aware of only three cases which have been filed so far. What is important is that the legal standards are not in place; and I might add that there has been an accelerated pace of trying to clean up activities since the act went into effect.

In order to assure that site cleanup will continue to proceed expeditiously, I believe it is crucial that Congress renew the mandate and augment the funding of the Federal Superfund Act. The efforts of this committee to reauthorize the Superfund are greatly appreciated and strongly supported in our State.

The question remains, Mr. Chairman, whether a Federal cause of action is a necessary and desirable way to address the third party liability problem. Let me outline just a few advantages that I see of the Federal action on this subject.

The proper management and disposal of hazardous waste and the cleanup of contaminated sites is a problem of national scope. It deserves a national solution. Transportation, treatment, disposal of hazardous waste, if not carried out properly, threatens the environment, the health of the citizens of every State. All citizens deserve the protection which can be provided by uniform national legal standards for this conduct. With greater certainty about the legal risks inherent in the production, use, and disposal of hazardous substances, industry can make its own decision about how to minimize those risks. Knowing the potential cost of continuing current practices will be a strong incentive to examine and, where necessary, to correct those practices.

Finally, national minimum standards help to reduce bidding wars for the location of new and expanding industry among States with different standards.

As you consider a Federal cause of action for third-party liability, one other issue should be kept in mind. The setting of legal standards necessary to adjust the conflicting rights of private parties is an area of the law which has largely been left to the States. In addition, the environment of each State is its own unique heritage. States must retain the authority and responsibility to protect their environmental heritage and the health of their citizens.

Therefore, Mr. Chairman, if the Congress chooses to enact a Federal cause of action in this area, it should not displace the authority and responsibility of the States. It should not preempt State law in this subject. Instead, Congress should compliment the State statutes, such as Minnesota's, by adopting uniform minimum Federal standards.

Thank you, Mr. Chairman.

Senator STAFFORD. Thank you very much, Mr. Humphrey, and I compliment you on being even more brief than your two predecessors.

The next witness, Mr. Payne, I am told—and I am delighted to have this recalled to my attention—was at one time a resident of the State of Vermont; and without further identifying what I understand was one of his last political acts there, let me say I am grateful to him for it and in consequence welcome him here. Particularly, I may have to ask him to go back to Vermont in 1988.

STATEMENT OF JAMES A. PAYNE, ATTORNEY, PEPIN, DAYTON, HERMAN, GRAHAM, AND GETTS

Mr. PAYNE. Thank you, Mr. Chairman, and Vermont still remains my second favorite State at this point.

Senator STAFFORD. You have made a good point with the Chair.

Mr. PAYNE. It is a privilege to be here today and I appreciate the opportunity to present testimony in support of measures to aid and compensate individuals who have suffered injury from exposure to hazardous substances.

I am here today because my law firm was active in the drafting and passage of the Minnesota Superfund Act. While we represented several clients in that debate, I emphasize that I am here today as an individual, but I hope that my experience in the Minnesota debate will be of some help to you as you face many of the same issues.

As you have heard, Minnesota is one of the first States to have grappled head on with the difficult substantive issues which toxic injuries raise. The debate in Minnesota was a lengthy and a hard-fought one, and as result of our passage of legislation some things have happened, and some things have not happened. What has not happened is this: In spite of wide coverage of the act, and in spite of the existence of about 100 hazardous wastesites in Minnesota, industry has not suffered a flood of lawsuits. Indeed, to my knowledge, a year and a half after the act was passed, only two or three lawsuits have been filed. Toxic tort cases, even with statutory causes of action, remain complex and costly actions to bring.

What has happened is that soon after passage of the act several parties who are resposible for major dumpsites—and it's my understanding that it's about 20 dumpsites—voluntarily offered to clean them up. Private parties, it is my understanding, have committed about $17 million to this effort. This has occurred without lawsuits and without agency action. It is difficult for me to believe that this had no relation to the passage of our act.

We have, of course, also suffered some negative criticism of our business climate as a result of this act, and I think this is simply the price we pay for having been a leader in this difficult and complex area.

I think the establishment of a Federal cause of action would accomplish several goals. Clearly, the purpose of tort law is not only to compensate victims, but also to modify the behavior of tortfeasors so that risks of injury are reduced.

Here there are several important public policies at stake. I think we want industry to explore new production processes that will lead t the reduction of hazardous waste. We want them to recycle and treat wastes to render them less hazardous. We want them to investigate, in advance, and to monitor sites where hazardous wastes are being sent to insure that those are being properly managed and that the owners and operators are fiscally responsible. I think, importantly, that we want industry to voluntarily clean up those sites where wastes have been improperly disposed of in the past. I think that allowing private individuals who have stake in the matter because of their own injuries to sue would augment cur-

rent enforcement efforts and support the accomplishment of these goals.

That has been our experience in Minnesota, and I think it would be the same experience here. I think the bill in front of you is not an extraordinary remedy. It does not create any new risk of injury; that risk is already there. What it does do is to take a modest step toward shifting the risk to the parties who have profited in the past and who stand to profit in the future from creating the risk.

Strict liability is the way the common law is now moving. I think even in the absence of a specific statute, most lawyers would be careful before advising a client not to assume that the liability for the disposal of hazardous waste would be strict.

This bill aids plaintiffs on the issue of causation in some very important ways. As you know, the issue of cause has two aspects. It has the legal aspect—that is, what rules do you use to establish cause, and it has a scientific aspect—what is the evidence of what, in fact, happened? This bill makes no changes in the legal aspect; no standards are changed, no burdens are shifted, no presumptions are created. What it does do is to aid plaintiffs and others in marshaling or in underwriting the cost of marshaling the scientific evidence. I can't emphasize enough how important I think the provisions are which mandate the development of health effects documents and which advance the cause of information gathering.

Proving causation in a toxic tort case is a two-step process. You have to establish a connection between the release and the exposure, and then a connection between the exposure and the illness or the injury. Both are very costly. We have a client now who has been drinking contaminated water for years. We think we know where the contamination came from, but we can't prove it at this point and we are awaiting the result of an EPA study on the direction of ground water flow. That study will cost $2 million to $4 million. We are fortunate that EPA is doing this; without that study there is no way that our client could afford to do this, and there is no way that we, as a law firm, would be able to advance those costs.

In at least one other instance we have been unable to take a case because we have been unable to finance studies of the relationship between exposures and certain illnesses.

I think that the bill also makes some provision for other costs. For example, we have a client whose doctor has said that on account of his exposures to certain drinking water, he needs a thorough and complete physical once a year for the rest of his life. This is a clear cost of exposure, and I think that the health effects provision which provides for medical testing would help individuals who are in that situation.

In short, I think in toxic tort cases the adversary system won't work unless the resources are reasonably equalized, and these measures go a long way, I think, toward equalizing those resources.

As an aside, I was sorry to see that the part of the bill that provides for alternative water supplies was limited to drinking water rather than household water. Again, we have a client who has been told by public health officials not to use his water for any purpose. Not for drinking, not for washing clothes, not for showering. Fortunately, he was able to find an alternative source of water; but I'm

sure there are others who are in the same position who have not been so fortunate.

Finally, I know a question has been raised as to whether it is appropriate to establish a cause of action under Federal law; and frankly, I do have some questions as to how a Federal cause would relate to such State tort doctrines as comparative fault. I agree with Attorney General Humphrey that if you adopt a Federal cause of action, it ought not to preempt State law. However, I think that there is good precedent for it. I think that we are dealing with industries which are national in scope, and I think that the laws which protect our environment are now Federal—or derived from Federal ones—and that minimum uniform laws would reduce bidding wars and renew our commitment to environmental quality as a national concern.

Senator STAFFORD. Thank you very much, Mr. Payne. I think I can say to you and to the attorney general of Minnesota that our bill does not, as it is currently formulated, make any attempt to preempt State law.

The next witness will be Sheila Birnbaum. We welcome you here this morning. We are grateful for your appearance.

STATEMENT OF SHEILA L. BIRNBAUM, ATTORNEY, SKADDEN, ARPS, SLATE, MEAGHER & FLOM, AND PROFESSOR OF LAW, NEW YORK UNIVERSITY SCHOOL OF LAW, ACCOMPANIED BY LESLIE CHEEK III, VICE PRESIDENT, FEDERAL AFFAIRS, CRUM & FORSTER INSURANCE CO.

Ms. BIRNBAUM. Thank you, Mr. Stafford. I appreciate the opportunity to speak to you today as counsel representing the American Insurance Association.

I have taught product liability and tort law for approximately 12 years and have been involved as a lawyer defending companies in product liability and toxic substance cases for over 20 years. I hope that my experience, both academic and practical, can be of some assistance to the committee in examining the Federal cause of action provided in the proposed legislation and the implications it would have on the tort system.

The American Insurance Association, as you well know, is composed of more than 160 publicly owned insurance companies providing property and casualty insurance. Additionally, assuming the proposed Federal cause of action is insurable at all, these companies will be providing the vast majority of insurance to cover such claims.

The American insurance industry has been in favor of and has supported legislation addressed to the cleanup and prevention of hazardous waste and pollution. But the insurance industry—and I think much of American industry—has doubts about the need for a Federal cause of action in this area in view of the continuing development of State common law in the area of recovery of damages for victims of pollution and toxic substances.

I would like to address, if I may, some of the tort law problems that I believe will arise if a Federal cause of action is adopted as proposed in your June 19 draft. I understand there have been some amendments to that draft, so I will limit my remarks and, hopeful-

ly, not discuss some of the problems that have been addressed already with regard to the admissibility of evidence that would be considered unreliable and inadmissible under today's standards, especially under the Federal rules of evidence, and other questions with regard to causation, which I understand also have been addressed in a new amendment that I have not yet had as opportunity to study.

I would like to focus my remarks on the issues of strict liability, joint and several liability, and damages, without addressing, in the first instance, whether there is any need for a Federal cause of action, which is a question other speakers will be discussing.

The proposed amendments would impose liability upon defendants under an absolute liability system. Strict liability under this bill is the equivalent of absolute liability. Even in areas where today we have strict liability—for example, in cases involving abnormally dangerous activities or allegedly defective products—we are not talking about absolute liability. In fact, a system of absolute liability would represent a radical departure from traditional and sound principles of tort law.

The doctrine of strict liability in product liability cases and cases arising out of abnormally dangerous activities requires, in most instances, an examination of conduct and a balancing of risks against utility. For example, under principles of strict liability as embodied in the restatement—second—of torts, section 520, applicable to abnormally dangerous activities, specific factors are set forth requiring some evaluation of the nature, utility, and appropriateness of the activity as well as the conduct of the defendant. This remains an integral part of any consideration by a court or a jury in determining whether the defendant should be strictly liable. In contrast, the legislation under consideration here would impose absolute liability. Not only is there no provision for weighing risks, utility, and conduct, but only three defenses—an act of God, an act of war, or an intervening, unforeseeable act of a third party—would be permitted. Even in strict product liability cases today, in almost every State, a defendant may assert various defenses, including state-of-the-art, assumption of risk, misuse, and subsequent alteration or modification of a product.

Moreover, in almost every jurisdiction today some principle of comparative fault prevails even when we're discussing strict product liability. The plaintiff's conduct can be considered, and there can be a reduction of damages based on the plaintiff's conduct. Yet, in this act as proposed, the plaintiff could voluntarily, intentionally, even recklessly act in such a way as to expose himself to a toxic substance, and there would appear to be no opportunity for the defendant to establish this fact so as to reduce the plaintiff's award or—in the first instance—to preclude plaintiff from recovering at all.

Under our common law system, which provides for recovery of a very broad array of damages, the approaches to liability that require a weighing of risk, utility, and other factors are not meant to frustrate recovery by injured plaintiffs or to insulate defendants against liability. Instead, they are aimed at assuring that compensation is paid when it is rational, fair, and in the best interests of society to do so. We do not have an absolute compensation system;

indeed, our system is also concerned with deterring negligent or wrongful conduct while at the sametime preserving incentives to proper conduct. This bill would treat good actors and bad actors alike, supplying no incentives to corporations "to clean up their act," so to speak.

It would also make it impossible for insurance companies to determine premiums on the basis of the acts or conduct of particular insureds because all defendants would be treated alike, whether they are blameworthy or not. The good company, the company that acted responsibly and reasonably, can be held just as liable as the bad actor. We believe that this will seriously impair the ability of insurance companies to price and provide coverage on a rational basis to companies subject to liability under the proposed legislation.

In addition, the disincentive to responsible conduct is exacerbated by the joint and several liability provisions of this bill, which, again, operate without regard to fault. For example, a defendant that merely had the misfortune of placing his waste in the same disposal site as other companies that acted recklessly or even criminally may nonetheless be held liable for the entire judgment. And it is not sufficient to say that there is a right of contribution from other wrongdoers, especially if the culpable enterprises cannot be identified, are bankrupt, are out of business, or for any other reason are not subject to suit

I believe Mr. Freeman will in all likelihood discuss the question of joint and several liability, and so I will not focus on that issue other than to point out that there has been a great deal of litigation under CERCLA dealing with the availability and practical implementation of joint and several liability. I would draw your attention to the case, *United States* v. *A&F Materials Company,* where Chief Judge Foreman of the southern district of Illinois commented that joint and several liability is extremely harsh and unfair if it is imposed on a defendant who contributes only a small amount of waste to a site.

In addition to the problems that arise out of strict liability and joint and several liability, there is one other troublesome issue that I would like to mention—that is, the provision relating to damages. As written, the June 19 draft would permit recovery for the most speculative kind of damages: the risk of future infury. I would suggest to you that almost every court in the country that has addressed this issue has denied recovery for risk of future injury. Courts uniformly have found that these damages are too speculative and that permitting recovery for risk of injury in the future would overcompensate many people while undercompensating others who, at some time in the future, actually do sustain injury. I think the way the statute of limitations is proposed in this bill would resolve much of the concern about assuring recovery for injuries that occur in the future.

Senator STAFFORD. Could you summarize at this point, please?

Ms. BIRNBAUM. Yes; I am just about to do that. The common law system of tort law is a very delicately constructed system that carefully balances societal interests, the interests of injured persons, and the rights and obligations of defendants. It should not be tampered with lightly. You should consider, as I know you will and ex-

amine closely whether there is in fact a need for new remedies in this area, and if there is a demonstrated need, how it can be implemented without doing violence to established principles of tort law.

Thank you.

Senator STAFFORD. Thank you very much.

I think we should note for the record here that neither in the earlier version nor in the one that Senator Randolph and I propose to introduce is there any provision with respect to joint and several liability. There is that provision in the House bill; somehow, we seem to be getting credit over on this side of the Capitol.

Ms. BIRNBAUM. Perhaps, Senator, you can influence your colleagues in the House to drop that provision.

Senator STAFFORD. The next witness is very well known to us. He has advised and counselled with us before. Mr. Freeman, we're happy to have you here.

STATEMENT OF GEORGE C. FREEMAN, JR., ATTORNEY, HUNTON & WILLIAMS

Mr. FREEMAN. It's a pleasure to be here, sir, and I am here, I believe, because at one point I served as 1 of the 12 members of the Superfund 301(e) Study Commission as one of the designees of the president of the American Bar Association. The views I express here, though, are my own; they shouldn't be attributed to the 301(e) study group, my firm, or its clients.

I'd like for us to start where we started together back in 1980. We had a bill, S. 1480, which provided a Federal cause of action; it was more limited than the staff proposals, and, perhaps, your bill, which I have not seen today. At that time those provisions were a cause of considerable concern to several members of this committee. Senator Dominici, you, and Senator Bentsen and Senator Baker addressed it in detail in your separate statement; and Senator Simpson, you did, also.

I think that major concerns that were voiced at that time were motivated by the proposal to change the rules of the game retroactively, and the major problems that that would create. First, it would shift the balance between private litigants, and plaintiffs would be able to, in effect, piggyback on the massive resources of the Justice Department.

Second, we had the remarkable statement of a witness for the Justice Department that the Government is perfectly willing to punish the innocent for the sins of the guilty.

Third, Senator, you recognized that changing the rules retroactively makes it impossible for the private sector to assess liability risks and, therefore, that threatens the continuing availability of insurance.

And, finally, there were substantial constitutional questions about the retroactive imposition of liability on persons whose conduct, prior to the date of enactment, was neither illegal nor actionable, in the sense of subjecting them to liability under applicable State laws.

There was a Senate compromise. Most of you participated in it. You know that substantial departures and changes were made from what had been proposed in S. 1480 and the compromise bill. It

was the latter bill without amendments, except those you had agreed to, that became the law of the land.

The 301(e) report was one of the studies mandated as a part of the compromise that eliminated the private cause of action provisions. There were 12 of us on that study group; three leading plaintiffs' lawyers, one of them the president of the ATLA group. There were three distinguished professors who were prominent in the field of tort law. Then also, probably one of the most distinguished retired senior judges, Judge Breitel of the New York Supreme Court, and then there was me. I was there because I had some experience in environmental law in the administrative area.

It took us about a year and a half to do our study. I don't know how much time the other lawyers spent, but I devoted more than half of my working time for 1½ years to that study, with the full-time aid of an associate and a paralegal. So we did our homework. We discussed and talked about these issues at great length.

One of the conclusions we reached was not to recommend a Federal cause of action to you. That was a unanimous decision. Everyone had his different reasons for reaching that decision, but we shared some of them. There were two shared major reasons. The first was that we did not believe that the present tort system, in any area, is adequate to deal with smaller claims. And what do we mean by smaller claims? We took the definition of the plaintiffs' lawyers, they said that anything below $50,000 to $75,000, because they won't take claims like that on contingent fees if they're smaller than those figures.

Therefore, we recommend a limited administrative remedy to you to deal with those smaller claims. The proposals before you still would not deal with those smaller claims. The tort system as such—and this was our unanimous conclusion—is inadequate to deal with those smaller claims, and I think those are the bulk of the claims that you are likely to get for past conduct, or present or future conduct.

Second, a majority of our members—and I was not among that majority—felt that as to larger claims, State tort law is totally adequate to provide a remedy for persons who have been injured. There were several of us who believed that there are serious drawbacks to the present tort system. In our view it is costly, wasteful, and too much of the money goes to the transaction costs—that means to make us lawyers rich—and very little of the money trickles down to the victims. But that's another subject for another day.

All you would do by this add-on Federal cause of action is add to that problem, not solve it.

There were four other problems I thought that had to be addressed if you were going to deal with a Federal cause of action. Preemption—if you were going to create a Federal cause of action, preempt State law and give us at least uniformity and predictability as to future conduct.

Second, the scope of compensation. If you relax the rules of evidence and you make it much easier to impose liability on people, and if you adopt the present standard of the Superfund Act, which is strict liability, which—as the Government interprets it—is absolute liability, abandoning all the traditional notions of strict liability that the State courts have evolved involving balancing—then

defendants are sitting ducks. If you're going to make them pay, make than pay only for economically determinable damages: medical expenses, rehabilitation costs, lost wages and earning; and, indeed, that's what your earlier bill, S. 1480, was limited to. But there is no room in such a system of absolute liability for subjectively determing damages, particularly if they are left to a jury. Pain and suffering and punitive damages—I think the system won't work if you include those subjective damages.

So I would strongly urge that you preclude them; and also preempt State law. Do not let them be awarded under State law where you are proposing strict joint and several liability.

Finally, there is the problem of retroactivity. I think the problems posed by retroactivity are illustrated by the injustices of the present act. Justice Storey, in a leading constitutional decision well over a century ago, defined retroactivity for constitutional purposes as "the creation of a new obligation, a new duty, or a new disability." Now, if we are talking about preenactment conduct that was neither illegal nor actionable under prior State law, we are—despite current arguments of the Justice Department under the current act—imposing new liability, retroactively constitutionally.

Let's look at the problems created by that. If you take your present act, you know that in the effort to reach a compromise a lot of difficult issues of detail about the scope, nature, and extent of liability were not addressed in your 1980 compromise bill. Let me just give you the five key areas where America is engaged in massive litigation today to find out what the present act means.

First, what is the standard of liability applicable to preenactment conduct? Is it applicable State substantive law? That is what we were talking about back in 1980 when we talked about the guilty. If we are talking about the innocent back in 1980, we were talking about the people who had not violated any law and would not be liable under any law. Or is it strict liability? And if it's going to be strict liability, is it traditional strict liability or is it absolute liability? That's a subtle but very important qualification.

Second, what is the standard of causation? And who has the burden of proof? EPA is taking the position in litigation now in the courts that it does not have to prove causation. If it simply shows that a person was a generator—he was one of 70 people who sent waste to a waste site—and that the waste site presents a hazard, then it doesn't even have to show that his waste is presenting any hazard, just that he sent it there. And under the concept of joint and several liability which was left open deliberately, you can put the whole burden of everything on him. And if you then turn around and say, "Well, then, he can go after the other people," that's not at all certain. The Supreme Court has held time and time again that there is no implied rights of contribution under Federal statutes. Since you did not address that issue, there is substantial doubt that the courts would give people the right of contribution under Superfund.

Third, what is the effect of settlement? That's another key issue. I detail that in my testimony. There are other issues mentioned there. All these key issues are being fought out now in the District courts. They will ultimately go to the circuit courts of appeals, and then finally, 3, 4, 5 years from now, the Supreme Court will resolve

them—if it doesn't throw the statute out as unconstitutional—and then, and only then, can we know what the law is.

Now, the add-on Federal cause of action would simply make that terrible situation worse. Let's think about the fairness of that situation. How would——

Senator STAFFORD. I realize and apologize for our time constraints. Could you summarize at this point?

Mr. FREEMAN. I certainly will.

I finally ask you to think about the implication of where we are going in forcing our Nation to solve all of its problems in the courts. I call this process the adjudicalization of America. I think that there are better ways to handle these problems. I think administrative remedies afford a better system; they are quicker. More of the dollars go to the people we need to compensate. Less go to us lawyers—defense lawyers and plaintiff lawyers. And, finally, we would give more predictability to our business community, and particularly in the areas emphasized by prior speakers where our industry is having added costs imposed on it in international competition, and that is threatening the continued existence of some of our industries.

So I come back to the point that we started out together in 1980, and let's don't punish the innocent for the sins of the guilty.

Senator STAFFORD. Thank you very much, Mr. Freeman.

Our final witness this morning will be Mr. Clay of Atlanta, GA. Mr. Clay.

STATEMENT OF A. STEPHENS CLAY, ATTORNEY, KILPATRICK & CODY

Mr. CLAY. Thank you very much, Mr. Chairman. I am Steve Clay from Atlanta, and I am a private lawyer in a firm very similar to the firm Mr. Freeman is in. There are about 130 of us; and until 1980, we had almost exclusively represented industrial clients or people who were defendants in cases of this nature. Since 1980, as a result of the Triana, AL, case which has been studied in some depth already by this committee, we have, in a sense, seen both sides of the street. Although we continue to represent many defendants in the area, including some who have sites on the Superfund list, our experience in the litigation generally is that whether you are a plaintiff or a defendant, you should be in favor of a Federal forum for the resolution of these disputes.

If I can take a moment to describe the case we were involved in. Essentially, since 1980, in that case we have, as a firm—the case is now settled and I'm not here in anyone's behalf in that litigation—as a firm, we accumulated 30,000 hours of experience in toxic tort litigation. That required on our part a decision that we were willing to commit between $2.5 million and $3 million in billable, contingent fee time from our law firm. It also required in financing the expenses that were associated with enabling these people to find out what had happened to them, which they could not otherwise do—we were obliged to finance 500,000 dollars' worth of toxicology studies and clinical studies and physical analyses and in bringing doctors into the community. This is a poor community of about 1,100 people in Alabama. They were, most of them, agricul-

tural workers. There is a high rate of unemployment. There were 400 adults and 700 children in the community, and they had lived for 25 years south of a chemical manufacturing plant located on a Federal military reservation where DDT was manufactured.

Their principal source of protein for that 25 years was the fish in the river, and the fish were loaded with DDT. We found out through a study done by CDC that they had the highest individual body burdens of DDT that have ever been accumulated in anyone.

They turned to various people for help. They turned to the State of Alabama for help; they turned to TVA, which regulated that portion of the Tennessee River; they turned to Department of the Army for help; they turned to EPA for help; they turned to the Federal Government for help. They could not get it. The way in which the legal system presently exists, the way it is structured does not enable people who have been clearly victimized by chemical exposure to find out what has happened to them. They had to come to private lawyers and, frankly, had we understood at the time that we were going to spend $500,000 in expenses and put $2.5 million to $3 million in contingent time into the case, I am sure that we would not have taken it.

Fortunately, we were large enough as a firm—and perhaps we're romantic enough as a group—that we were not able to see or did not want to see what the business realities of the proposition were. I can tell you that since then, since this case was concluded—and it was settled about a year ago—that we have looked at 10 to 15 other toxic tort cases of comparable size and dimension, and that the problems associated with litigating those cases have persuaded us that we could not rationally commit to them. We still are looking at cases, but one of the most crucial variables is whether you're going to be able to get into Federal court and rely upon the accumulate experience that the Federal judicial system has with managing complex litigation. If you take a case that involves 1,100 individuals who have all been hurt in slightly different ways, and you take it into a State court litigation system, you have just stopped most State court litigation judicial systems dead in their tracks. They don't have the reserves, they don't have the resources, they don't have the personnel, they don't have the experience to cope with claims of that nature.

If you take a case like that into Federal court you will find they have dealt—if not that individual judge, then Federal judges in that district or Federal judges elsewhere in the country—have dealt with claims of comparable complexity. They know how to organize the case and they are responsive to the kinds of case management proposals that make it possible for the case to be litigated.

There has been a lot of talk about transactional costs and lawyers getting rich and creating another lawyers' relief act with this proposed legislation, and I think it's a fair question. Toxic tort cases can not be litigated unless the plaintiffs' lawyers have a fair chance of being compensated. I don't think that this committee or this Congress is prepared yet to say there will be no causes of action for toxic tort. The issue is not whether we are going to have causes of action or not have causes of action; the issue is, where are they going to be litigated, and how will they be paid for?

If you decide that they are going to be litigated in State courts and that the plaintiffs are going to have to bear all the expenses of medical studies and legal assistance themselves, my response to you is, they won't be litigated. That is effectively sounding the death knell of whatever claims are out there today that we don't know about, that we don't understand the consequences of today. The defendants' lawyers are going to get paid anyhow, and the defendants can finance the expense of these proceedings forever. For every dollar we spend on the plaintiffs' side in our case in medical studies, the defendants spent three. For every dollar we invested in time, the defendants invested two. There is not going to be any question about whether they can afford their side of it, but there is substantial doubt—and I think if you look at where the cases are being decided right now—you will see that the record confirms that very few cases are being litigated, even though many potential claims exist. Where cases are being decided, they are being decided in Federal courts because they are the ones who have enough experience to be able to handle such cases. They are being decided on the basis of diversity jurisdiction, and they are applying or attempting to apply, typically, State rules. This results in a complete absence of uniformity, and a complete lack of predictability as to what's going to happen.

Without uniformity and predictability, as has been remarked by several of the other speakers this morning, industry cannot tell how it ought to behave in the future, and the lawyers considering or involved in a particular case don't know whether they ought to file it in the first place or, if they file, whether to settle it or not because they don't know whose law is going to apply. The State courts have not functioned in the last 3 years as working laboratories in this area; they have not produced the body of case law that you would have expected them to produce, given the fact that we clearly have a problem national in its dimension that is pervasive throughout the community and that it is affecting innocent people. So when you add the uncertainty of State law to the cost of these cases and also add the risk that you will end up in State court, you have a situation which discourages appropriate, good faith litigation.

I think that without a Federal cause of action we as a society won't know enough, and you as our representatives won't know enough, to make the ultimate decision that has to be made as to whether society can afford to compensate people for the exposure which has happened to them up until this time. We need Federal litigation and Federal forums, courts that can handle these cases in order to get enough information to make the ultimate social decision that has been referred to by several of the other speakers.

Thank you.

Senator STAFFORD. Thank you very much, Mr. Clay, for a very good statement.

At this point the chairman would like the record to show, as it did for Senator Mitchell, that Senator Durenberger is a member of the Finance Committee and that he too has felt he would have to split his time between this committee and that committee.

Now that we have reached the point of questions, it would be the Chair's suggestion to his colleagues that, in the first round at least,

that we confine ourselves to 5 minutes each in view of time. Is that agreeable? Is there objection to doing that?

[No response.]

Senator STAFFORD. Hearing none, let's start out on the basis that we will go for 5 minutes each, and the Chair is advised that two of our witnesses, Mr. Willard and Attorney General Humphrey, need to leave by 11:45 because of scheduled previous commitments. So the Chair would ask the members to deal with these two gentlemen first in order to accommodate them since they have gone to considerable trouble to be here with us this morning.

Having said that, Mr. Cheek, you have not testified thus far; you are here with Ms. Birnbaum, but it's my understanding that you have been an outspoken and consistent representative of the insurance industry with respect to various Superfund proposals. I see you nodding your head affirmatively. As you know, Senator Randolph and I, as I have stated, hope to introduce later today a set of proposed amendments to the Superfund program, one of which would establish a Federal cause of action. Have you had an opportunity to review those proposed amendments? If you have, in your judgment, would they establish a program which is insurable?

Mr. CHEEK. Thank you, Senator. Yes, I did have a chance last night to examine the draft, and I would say that with some significant qualifications that can be dealt with later, the program that you have proposed would be an insurable proposition for us. If I might, I'd like to explain why that is the case in contrast with some of the earlier proposals.

Senator STAFFORD. Certainly.

Mr. CHEEK. The revised staff draft is a dramatic improvement over the proposals that were put out on June 19 and June 29. It corrects a number of serious problems of insurability that the earlier proposals posed for us.

First, the earlier drafts seemed to suggest that if a defendant couldn't meet one of the three specified defenses to Superfund cleanup liability, he would be absolutely liable for bodily injury caused by a release. The revised draft makes it clear that defenses to strict liability for bodily injury are not limited to those three defenses specified in the cleanup portion of the current Superfund law. And as we read it, we would interpret it as providing that the courts could continue to decide, on a case-by-case basis, what circumstances would warrant the imposition of liability on defendants. And in comparative fault States, courts could continue to take into account plaintiffs' contribution to their own harm.

Second, the revised draft partially corrects a problem created by trying to use language that was originally drafted to make sure that everyone who put anything in a dump site would help clean it up, to establish liability for bodily injury that might be caused by only one or two or three of the substances in that site. The new draft makes it clear that bodily injury liability may be imposed on a generator defendant only with respect "to harm caused by releases of hazardous substances, pollutants, or contaminants owned or possessed by such persons." This is a good change, and we would suggest that that protection be broadened to other defendants as well.

Third, by using the term "bodily injury," the revised draft solves the problem created by the earlier drafts' use of the much broader term, "personal injury," which posed to us the possibility that claims for psychic harm not associated with physical injury could be contenanced. The use of the traditional bodily injury term should help limit recoveries for psychic harm to those instances in which there has actually been physical injury as well.

Fourth, while—excuse me.

The revised draft would require the admission of a variety of statistical data on issues of injury causation. While we oppose this section, it does preserve the authority of courts under rules 402 and 403 of the Federal Rules of Evidence to throw out plainly irrelevant or misleading or prejudicial studies, and we think that that is a very encouraging step.

Also encouraging is the deletion of the "without regard to the size of the sample" qualification of epidemiological studies that appeared in the earlier draft.

Fifth, both the earlier draft and the revised version are silent on the issue of joint and several liability, encouraging us to believe that the courts would be free as they now are under current Superfund law to impose joint and several liability when it is necessary and to develop appropriate criteria for apportioning liability when it is not necessary to impose joint and several liability, as we have seen in the *A&F Materials* case and the *Stringfellow* case.

But here, also, a specific right of contribution would be even more helpful so that when the courts do impose it there is some basis upon which defendants can seek to recover from other responsible parties.

Finally, we note that the revised draft makes no attempt to shift the burden of proof on injury causation issues from the plaintiff to the defendant. We regard that as an encouraging step.

While these major problems of future insurability have been addressed by the revised draft, we continue to believe that a Federal cause of action is unnecessary and we have several remaining concerns about the details in the bill that you will introduce today.

Some threshold amount should be established in claims for diminution in value of property so as to prevent speculation. I think also the statute of limitations should be rewritten so as to avoid reviving claims that have been time-barred under State statutes of limitation. As I read it, even the revised version of the statute of limitations has unlimited retroactivity.

Third, the provisions for financing plaintiffs' lawsuits out of cleanup tax revenues are, in my view, outrageous and have no place in this legislation.

Finally, I would comment that permanent relocation as a part of remedial action could not be costed out and likely would be excluded from any coverage that we provided to those subject to Superfund liabilities.

I'm sorry for the long-winded response to your short question, but I thought it would be helpful and clearer to see how the two drafts differed in their approach to these problems.

Senator STAFFORD. It has been Mr. Cheek, and I am grateful to you for going through it in the detail that you have.

In my last minute I would like to ask Attorney General Humphrey—over a year ago your State enacted a private right of action for victims, which is what this committee is considering. We've been told such actions could bring ruin to American industry. My question, in brief, is: Has this happened in Minnesota?

Mr. HUMPHREY. Mr. Chairman and mermbers of the committee, not to my knowledge. In fact, if you take a look at all of the statistics, Minnesota's industry and economy are doing very well.

Senator STAFFORD. And I think that the law which Minnesota has adopted, that you are administering, is probably considerably more stringent than that which this committee is contemplating.

Mr. HUMPHREY. Mr. Chairman, I have not had an opportunity to see the most recent documents. But one thing I would emphasize, as my friend from Minnesota here indicated, there was a very active movement after the adoption of the statute by industry, by themselves, to bring themselves into conformance with the statute and to clean up on their own. And I think that self-help was a vast improvement; whether or not it was directly related to this activity, I think it was.

Senator STAFFORD. Thank you very much, sir.

Senator Randolph.

Senator RANDOLPH. Thank you very much, Mr. Chairman.

Mr. Clay, this is my question addressed to you because in a very few seconds I shall address the question to all eight who have testified.

Is Ellis Arnall still practicing law in Atlanta?

Mr. CLAY. Yes.

Senator RANDOLPH. A point of history which will not be, perhaps, of interest.

I presented the constitutional amendment which became the 26th in 1941, when a member of the House. There was only one State that gave to 18-, 19-, and 20-year-old youths the right and responsibility to vote. Because Ellis Arnall at that time had been the Governor, his State was the first to give the vote before the Nation adopted it 30 years later. He came to Washington and testified, and said that he believed that in Georgia that lowering the voting age was worthwile. I had such high hopes as did he, but it turns out that in 1980, only 24 out of every 100 youths in that age bracket used the ballot. I wish you would just say to him that even though we are, perhaps, saddened, we did what we felt was right at that time, and we hope that youth will redeem itself in a greater degree in the election in November.

Mr. CLAY. I will communicate that message to him.

Senator RANDOLPH. Mr. Chairman, this is the question for all the panelists. We've heard eight of them today, and we've had some seven members present. I think it has been very helpful.

It is often difficult for me and for many of us to distinguish occupational exposure from environmental exposure to toxic substances. Witnesses, as I guess you know, Mr. Chairman, have come before this committee and come before the Labor and Human Resources Committee, and they have told us how limited workers' compensation programs are in attempting to cope with the toxic substances exposure.

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I ask all of you, or any of you who wish to speak, should we including what I call "workplace exposure," permitting suits against those responsible for exposing workers to the hazards of toxic waste? A very easy question for you to discuss.

Mr. WILLARD. Senator, first of all, we do think that it's very appropriate for you to raise this question, and we have been concerned that neither the staff draft of this bill, nor the House bill, clearly stated whether occupational exposure was intended to be covered. I think it is appropriate that this committee should face up to that question and resolve it one way or another.

Because we think we are opposed to the Federal cause of action in any event because of the possibly expansive liability the scope of which would be difficult to predict, we would also oppose expanding the Federal cause of action even further to cover that kind of exposure. But we do think it is appropriate for the committee to face the question and resolve it squarely.

Senator RANDOLPH. Well, I agree with you and I think it's very important. I believe in it. I'm not sure, Mr. Chairman and others, that this is the bill in which we can do that, and I only bring it up today because it is a part of this overall concern that we have.

How much time now?

Senator STAFFORD. Five minutes, I would say, Senator.

Senator RANDOLPH. Pardon me?

Senator STAFFORD. You have used 5 minutes.

Senator RANDOLPH. Yes; I would want to stay within that time. Hopefully, the Minnesota witnesses would address themselves to that—not now, but in a written form. I want to stay within the limits.

Senator STAFFORD. All right.

The Chair would say for the benefit of members who are not here because of conflicts this morning, and for those of us who are here, in the interests of time that we will have to submit questions to the panelists in writing, if that is agreeable, and your very early response would be deeply appreciated since we are at a critical point on this legislation. Our time constraints are that the Democratic Caucus begins its meeting in 12 minutes, and the chairman's meeting with the majority leader began 3 minutes ago.

That's our problem.

The chairman would say to Alan Simpson, my dear friend whom I'm about to recognize, that, Senator, this meeting can go on as long as you wish it to, and you will be recognized next. And after your 5 minutes, at the chairman's count, if you would recognize Senator Burdick for his and then conclude the meeting at your discretion, if you would.

Senator SIMPSON. I have the same meeting you do, Mr. Chairman.

Senator STAFFORD. I know you do.

But this committee has more at stake than your committee does.

Senator SIMPSON. I know.

Let me first thank you sincerely for responding to my request that we have some further witnesses. That has been most helpful; very generous of you, typical of you, and I thank you. I have practiced law for 20 years; and when I see something like a Federal toxic tort, it is an extraordinary adventure and I think it is a very

poor entry into the legal system. That's where I have a lot of trouble with it, especially when the Superfund study group has shared with us the fact that they don't look with favor on it and what it does with regard to the Federal practice, what does to the Federal Rules of Procedure, and what it does to the Federal Rules of Evidence.

You have mentioned some things yourself. I don't think anything here is to prevent people from access to the Federal forum; nothing is going to change here with regard to access to the Federal forum. But when we get to a Federal cause of action—well, I know enough about his game. I have 5 minutes, and it is running.

But those are some deep personal things. I have to think of some profound implications here and the effects, the costs on insurance, the impact of the competitive position of the United States, the effect of potential liabilities—all of those things, and all of its generates, by itself, in this place because we see some heart-rending personal tragedies. People always continue to bring those before us, embellished or unembellished, and they will tear your guts out. But somewhere along there we must ask the tough questions. I guess I get enough playing around in agent orange and nuclear regulation and uranium mill tailings to know that somebody has to ask those questions so we can sort out all the high drama and high emotion that goes with this game. It's tedious, it's red hot, it's emotional, and it is always punctuated by magnificient impatience. In other words, if the scientific community is failing, do something. If the medical community is failing, do something. If the psychological community is failing, do something. If philosophers have begun to exhaust themselves, do something, but move, move, move, and we have spread the statute books with that stuff.

Two questions. Mr. Willard, you pointed out the draft bill purports to require the admission of various studies and other types of evidence. Just swiftly, what is your view of the effects of that on the Federal Rules of Evidence and Procedure?

Mr. WILLARD. Well, Senator, we are concerned about that. I understand from the chairman that there is a new draft that is supposed to alleviate these problems. We have not seen the new draft and had a chance to study it, and I would appreciate our having an opportunity to look at the new draft and comment upon it from that standpoint.

Senator SIMPSON. If you would, and as soon as possible if you could because we certainly have a time problem.

Mr. Humphrey, if I may ask of you, sir, and indeed your father and mine did serve together; your father came to Wyoming when my father was Governor. I remember that visit distinctly. They were great friends, even though they didn't vote alike.

In view of the fact that only three cases have been filed under the new Minnesota cause of action, is it not a bit early to evaluate the full effect of that law?

Mr. HUMPHREY. I'm certain that more time will give us a better understanding, but I think that the fact is we have had over a year. It has been a widely discussed and debated law, both before the legislature and now, currently, in the economy, in the marketplace and I think that people are coming to grips with living with

it and it is showing that it does not open up the floodgates but does provide opportunities.

Senator SIMPSON. OK. Now, if we add one more layer to that, if it is working—and where we're saying now we are going to have a Federal statutory cause of action, you've got a State statutory cause of action; you have your State common law causes of action, and they all exist simultaneously. That's what will occur under this measure. How would that appear to work, in your mind?

Mr. HUMPHREY. I don't think it would cause a great deal of difficulty, and it would provide an opportunity where otherwise, because of practical reasons of initiating the lawsuits or otherwise, there may very well not have been the ability to have the right to sue.

Mr. Chairman, if I might I want to apologize to the committee. I did have a prior commitment before being given notice that I had an opportunity to come here. I would like to be able to leave and ask if the committee would not allow Mr. Williams, who is a member of my staff and who has had intimate working relationships with our present law, to take my place.

Senator SIMPSON. Without objection, so ordered.

Mr. HUMPHREY. Thank you.

Senator SIMPSON. Senator Randolph, if I may, I have a chairman's meeting. If I could I would certainly be very comfortable deferring to you if you have a few mintues to continue so that we might take the testimony of Senator Burdick and Senator Mitchell, and I will submit the rest of my questions in writing. Would that be appropriate with you, sir?

Senator RANDOLPH. I would want to cooperate always with the Senator who is now speaking. I will follow his advice—or at least, his counseling.

Mr. WILLARD. Excuse me, Mr. Chairman. I also had a prior commitment and previously obtained permission from the chairman to be excused. Again, I would be happy to answer any questions from the committee in writing, but I would ask the committee's permission to be excused at this time.

Senator SIMPSON. That would be perfectly appropriate. At this time, then, I would recognize Senator Burdick and place the meeting and the chairmanship with Senator Randolph for the concluding portion.

Senator BURDICK. Mr. Chairman, I would like to address this question to the attorney from Minneapolis.

I understand that your statute provides for strict liability and ordinary proof of liability for causal connection.

Mr. PAYNE. I'm sorry. I didn't hear that last part, Senator.

Senator BURDICK. I understand that your statute provides for strict liability, but you also have required the old-fashioned proof for causal connection, which means testimony, evidence, and so forth.

Mr. PAYNE. That's right.

Senator BURDICK. What is the quantum of proof necessary to establish causal connection?

Mr. PAYNE. We did make some slight alterations in law to aid the plaintiff in getting his case to the jury. Under the statute as it is currently written, if a plaintiff has evidence which meets four

different elements—that the defendant was responsible for a release, that plaintiff was exposed to a hazardous substance, that the release could have resulted in his exposure, and that a disease is caused or contributed by the substance—if he has evidence to show that, he gets his case to the jury.

The actual jury instructions, however, on cause in fact, and on proximate cause, are not changed. So we have made no changes there in what the standard for causation is. It is still a substantial factor. No burdens have been shifted and no presumptions have been created.

Senator BURDICK. Well, I don't know—do you have to establish by a preponderance——

Mr. PAYNE. It's still a preponderance.

Senator BURDICK. What's your quantum——

Mr. PAYNE. It's still a preponderance of the evidence.

Senator BURDICK. To establish causal connection?

Mr. PAYNE. That is correct.

Senator BURDICK. You haven't had any cases on this yet, have you?

Mr. PAYNE. No.

Senator BURDICK. Are there any in the United State anyplace?

Mr. PAYNE. On a preponderance of the evidence?

Senator BURDICK. On the question of the causal connection. In order to prove causal connection you have to have proof, don't you?

Mr. PAYNE. Certainly.

Senator BURDICK. And you were just telling me that you have to prove it in the old-fashioned way, by a preponderance of the evidence?

Mr. PAYNE. That's correct.

Senator BURDICK. All right.

Now, one more question to Mr. Freeman. You talked about retroactive liability and so forth. Suppose that we put into effect some legislation that imposes upon some polluter a liability that he didn't have before. Let us suppose that the law goes into effect on January 1. On December 31 he was not as liable as he was on January 1.

Now, the business that he was in did not change between December and January. Don't we have a question here of continuing negligence or continuing lack of care?

Mr. FREEMAN. Yes, sir; I really think that's the key issue, at least that I was trying to raise here. It's not the issue Mr. Clay raised, which is where will these cases be litigated, Federal court or State court. I don't care whether they're litigated in Federal court or State court. What I'm talking about is, what substantive standard is to govern liability, distinguishing between preenactment conduct and postenactment conduct, just the way you have given it.

Let me say that if you pass the law, it is going to become effective December 31; and you spell out in that law, in the statute, the answers to all those questions that I pointed out in my testimony that you left open in the 1980 Senate compromise on Superfund—if the law is clear and people can understand it, that fellow can either stay in business or get out of business. If you are going to impose absolute liability on him he can set aside reserves, get in-

surance if you're really clear in the way you're spelling it out. If you're being prospective only the insurance industry will insure it. I think that's a fair system. If you are going to impose liability on him, though, for preenactment activities, and to make him liable for past conduct which he has no way of remedying now and which was perfectly legal and which was not actionable under State law, then you've got true retroactivity in the constitutional sense of the word. And if you do that, I think you will raise fundamental questions of fairness and constitutionality. One way to avoid that to solve Mr. Clay's problem is that if you want to give people access to Federal courts for claims based on preenactment conduct, then make applicable State law the substantive law that governs that preenactment conduct. Then it is not constitutionally retroactive and it does not involve unfairness.

Senator BURDICK. I think we agree that if the conduct continues after the law becomes effective, we don't have any questions.

Mr. FREEMAN. No problem because he is on notice and he can act or not act. I think that's the whole way in which the law is normally intended to operate.

Senator BURDICK. Well, Mr. Chairman, thank you.

Senator RANDOLPH. Thank you very much, Senator Burdick.

Senator Mitchell.

Senator MITCHELL. Thank you, Mr. Chairman. My apologies to the members of the panel for not having been present during your testimony. There is a markup in the Finance Committee on legislation, some of which I am the author of, and I had to be there.

Mr. Freeman, picking up on your last answer, would you then support a proposal to create a Federal cause of action under the circumstances you have just indicated?

Mr. FREEMAN. If we're dealing—well, let's take it in two steps. First, if we're going to have a Federal cause of action which is remedial for past acts and based on preenacted State law? Yes, I think that would be a wise thing to do.

The second is if you're going to have a Federal cause of action that is going to create new substantive Federal law to govern postenactment conduct. And if you come to grips with the issues outlined in my testimony and reach a reasonable balance that the country can live with and business can go on, and you preempt inconsistent State law, I think we would all be better off.

Senator MITCHELL. Is there any member of the panel who disagrees with either of the two statements that Mr. Freeman has made?

Mr. WILLIAMS. Mr. Chairman, Senator Mitchell, we would, in the Minnesota Attorney General's office strongly disagree with the proposition that there would be a preemptive Federal cause of action that would exclude the States from having their law also apply.

Senator MITCHELL. Would that be your only objection to it?

Mr. WILLIAMS. Well, Mr. Chairman, Senator Mitchell, I think that the Federal cause of action prospectively would be a better solution than none at all.

Senator MITCHELL. Mr. Margulies, do you agree with what Mr. Freeman said?

Mr. MARGULIES. No, not at all. Not at all.

Senator MITCHELL. You are opposed to any Federal cause of action?

Mr. MARGULIES. At the present state of the record, we would continue to oppose a Federal cause of action on the ground I asserted initially, which was a process ground. The questions that have been raised here aren't questions that you will resolve in one panel discussion. It could be that after you have conducted full hearings on the revised kind of bill that's being discussed here, you might have a bill and you might not. You don't have it today. There's no record to support action today. I would have reservations beyond that point as to whether you could develop a bill that would go forward with the idea of a Federal cause of action and that would—if you would address the questions about whether the most effective way to provide resources, to provide payment is through this judicial system, I don't think that's been addressed. I don't think the committee or anyone has costed out what the total burden is that you will place on the productive sector by compensating the harm that you propose to compensate. Merely saying that "I'll do it with a private lawsuit, and there will be a remedy in terms of the judgment" doesn't change the fact that, as against actors, there is going to be the assertion of a cost load; and that cost load will have to be borne in some way. I see no address of what the cost load is and what is a fair way to allocate it.

What we're saying here doesn't go to the question of joint and several liability, whether it exists or doesn't exist, who in fact will pay, will it be a "deep pocket," what is the effect of contingent liability on groups that have had no liability before—the guy that picked up the guy, the person who picked up a phone and said to someone, "Pick up my waste and take it to the dump," had no other relationship to this transaction, and now may face liability for the full amount for no reason other than that phone call.

Senator MITCHELL. Well, of course, Mr. Margulies, you know very well that attempting to identify in advance the precise cost of this would doom it to failure; and were the standards you suggest applied to other areas of the law, no one would ever be able to recover from anyone anything else.

Can anyone identify in advance what the costs of negligence actions are brought as a result of accidents? That cost is borne by society. Of course, we couldn't possibly apply the standard which you suggest or there would be no recovery by any individual in any court of law within this country.

Mr. MARGULIES. When you speak to negligence actions, you speak to the ideas of an actor acting and violating some standard of care that he might understand.

Senator MITCHELL. That's right.

Mr. MARGULIES. The situation that you have here could involve a person acting extremely reasonably, acting like anyone else would act, and now you would impose on him very great risks——

Senator MITCHELL. Does that not occur now in other areas of the law?

Mr. MARGULIES. It doesn't occur in your straight negligence——

Senator MITCHELL. Are you suggesting there is no strict liability standard anywhere in the law in this country?

Mr. MARGULIES. I'm asserting that where it does exist, it has created the very kind of problems that we are talking about in terms of transaction costs that are now imposed for making payment for the harm that is imposed on those who live in——

Senator MITCHELL. But is there now not a cost to society in the persons who are unable to gain compensation for the injury and death that they suffered?

Mr. MARGULIES. Of course there is.

Senator MITCHELL. And should that not be weighed in the balance as well?

Mr. MARGULIES. Of course, it should be weighed in the balance, and what we are saying is, you ought to consider what the total cost is and whether the beneficiary that you are thinking of is going to be the one who enjoys the costs you are imposing, or whether it will go to groups that are irrelevant to the one who suffered harm.

Senator MITCHELL. Such as?

Mr. MARGULIES. Such as insurance adjusters, such as lawyers, such as to the overhead of a court system, such as the whole panoply of transactions.

Senator MITCHELL. I submit to you that lawyers and the court system are not irrelevant to the process; but for their existence, there would not be recovery for any of the people. And I just want to say that, first off, I strongly disagree with your repeated assertion, made in your written testimony here, that there is no adequate recored or there has been no inquiry into this area. This was included in the bill in 1980. There were hearings prior to that; there have been several hearings before this committee, and I think that there is a great deal of information available on which to base a judgment. The assertion that there is inadequate information is, of course, a subjective judgment, an opinion to which you are entitled, but I think it is important that there be registered a contrary opinion, and I hold that opinion.

Second, I have read parts of your testimony and I will have a number of questions in writing—time doesn't permit it now, and I wasn't present when you delivered it—but I will pick out a couple of things and make some comments on them.

This Commerce Department statement which I have just seen, dated yesterday, says:

> The proposals would subject U.S. industry to an expanded scope of damages for past and future activity involving harms such as pain and suffering, loss of income, profits or earning capacity, which terms are difficult to measure, and yet to be defined under the new law.

Mr. Margulies, as you well know, and as these lawyers know, in every State in this country every day of the week there are cases tried which measure pain and suffering, loss of income, profits, and earning capacity. And as Mr. Freeman has correctly identified, the existing rule of law is that substantive State law applies where concurrent jurisdiction exists, as between Federal and State courts, and there is no preempting State Law. So if we passed legislation, as Mr. Freeman indicated he would support, all of this would be irrelevant. I mean, measuring pain and suffering—of course it's difficult, but it happens every day in this country, in every State in this country.

Mr. MARGULIES. Well, if I understood what the chairman said to us earlier in this hearing about amendments that are now being proposed to the draft we saw, in fact the situation might be changed and some of the components of damages that we are addressing here and considering as inappropriate might in fact not be available in the bill that we will have and the proposal that we will have. So I think the very sponsors of this bill are reducing the components of damages that might be available.

You are asserting factors that are true, again, in the typical negligence case. I am not aware that, in the strict liability case, you would have all of the elements that you are discussing here. And I think that's what that statement was getting to.

Senator MITCHELL. Well, if you define pain and suffering, what is the relevance——

Mr. MARGULIES. Once you find liability, by whatever standard——

Senator MITCHELL. What is the relevance of which standard in terms of measuring the pain and suffering?

Mr. MARGULIES. I think we're going to the same point Mr. Williams made, which is a question of whether you go to psychic damages, whether you had to have an absolute injury rathern than the anticipation of the injury. We are addressing that kind of element that may have been previously in this proposal. I think it is probably no longer in this proposal, if I understood Senator Stafford.

Senator MITCHELL. Well, I'm reading your document, and it says "pain and suffering, loss of income, profits or earning capacity, which terms are difficult to measure and yet to be defined." All I'm saying is that of course, they are difficult to measure, but they are measured every day in every State of this country. And I can't see that as a reason to oppose this legislation.

Mr. CLAY. If I could, I don't think there is anything particularly unusual about what is being proposed in this legislation. The suggestion has been made that you are doing something novel or radical or different from the way you have operated in other areas. To the contrary; in areas where, for example, the Federal Government has chosen to regulate pervasively in the antitrust area, you have created private rights of action that are pursued in Federal courts. And the same standards that define whether or not certain conduct is criminal or produces administrative sanctions from the Government are applied to those private actions. And if you can meet those standards, or if the plaintiff is able to demonstrate that the defendant's conduct has offended those standards, damages and attorneys fees and all litigation expenses are available in Federal court and the statute prescribes what those damges will be. In the securities area as well, the same sort of pervasive Federal regulation is accompanied by private lawsuits. It is also true that the States have created parallel regulatory networks, both in the securities area and in the antitrust area, and have created their own private rights of action that are pursued in the State courts for those plaintiffs who have disputes that are relegated to their State where all the parties are within the State and they prefer to pursue that.

It is the most unusual thing to come in and pervasively regulate an area from the Federal governmental or administrative perspec-

tive and allow all the private litigation relating to and applying those same standards to be carried out in another forum, in some State court forum. I don't think what's being proposed here is extraordinary at all.

Senator MITCHELL. Well, I think it is even simpler than that. I just don't understand this violent objection to opening up the Federal courts to this type of case. We have concurrent jurisdiction as to between the State and Federal courts in a wide range of areas. Anybody who has ever tried a case in this country knows that all the pleading about the congestion in the Federal courts, the State courts are overwhelmingly overburdened in relation to the Federal courts; and any rational allocation of national resources in a republican form of government such as ours would see that this makes sense. If I understood the study in which Mr. Freeman participated, it confirmed the difficulty that some litigants have through the length of the process; and while they did not recommend this—I understand that, they recommended a more comprehensive administrative scheme akin to the workers' compensation programs being administered by the States—it just seems to me, Mr. Margulies, that your reaction is grossly excessive overreaction to what is really rather a modest proposal. And I don't know the gentleman's name on the end—we just spoke, I'm sorry—what is your name, sir?

Mr. CLAY. Steve Clay.

Senator MITCHELL. Mr. Clay said it really isn't all that unusual. Yes, go ahead.

Ms. BIRNBAUM. Senator Mitchell, I think there are two questions, and I'm not quite sure which one we are addressing. Are we talking about opening up the Federal courts to give a remedy in the Federal courts where there is no diversity, or are we speaking about creating a Federal cause of action with new substantive requirements that would differ from the common law requirements now in the State courts? I think that those are two different issues. The need to open up the Federal courts and overly burden them by creating a remedy in the Federal courts is not necessary. Many of the toxic substance and pollution cases today are being handled in Federal court under diversity jurisdiction. The same cases are also in the State courts. Mr. Clay said that the State courts have not been handling these cases but that's not true. Jackson Township, where there was a $17 million recovery, was in State court in New Jersey, and other State courts are handling similar cases as are the Federal courts, applying State substantive rules.

So the real question, I think, for your committee is to determine whether there is really a necessity for a new Federal cause of action when the State and Federal courts presently applying State law are adequately responding to these claims.

Senator MITCHELL. Well, if you had sat here during the hearings we have had in which persons who have been victimized testified about the problems they had in their State courts, I don't think you would as confidently assert what you just said. There obviously is disagreement about that and anecdotal testimony cannot serve as independently and exclusively as a basis for national legislation. But I think what you said is at least open to some question in terms of that availability.

Senator RANDOLPH. Senator Mitchell, would you yield to me?

Senator MITCHELL. Yes, sir.

Senator RANDOLPH. If you desire to continue to question, we have had a 5-minute rule; but there are no other members present and the panel is almost as it was at the beginning. I would be delighted for you to continue; and then I must go myself, but you would close the meeting.

I would say at this point we trust that we in the committee will begin the markup of this legislation tomorrow.

Senator MITCHELL. Thank you very much, Mr. Chairman.

Senator RANDOLPH. You will close it out?

Senator MITCHELL. I will close it out.

Senator RANDOLPH. If it's 30 minutes or whatever?

Senator MITCHELL. It will be less than that, Mr. Chairman.

Senator RANDOLPH. Remember, the Democratic Caucus is meeting.

Senator MITCHELL. And two or three other things that I'm supposed to be at.

Senator RANDOLPH. Thank you very much.

Mr. FREEMAN. Senator Mitchell, before we leave that question, I want to make it clear that when I said that I thought that if you made applicable State law determinative when it comes to pre-enactment conduct and if you also want to impose a Federal cause of action, and if you address the issues which I raised in my testimony and resolve them, then I think that would be a step forward and probably preferable, I did not want to leave the connotation that I thought that the staff draft, which is the only thing I've seen, or the proposed bill, which I have not seen, is the kind of Federal cause of action which I think is in the public interest.

I also think that if you are going to have absolute liability imposed on people for prospective conduct and if you do not put some limit on the kinds of damages they can be held liable for, you will discourage worthwhile economic activity from continuing in the United States. That is something you must take into the balance there.

Senator MITCHELL. Has that occurred, Mr. Freeman, in your judgment with respect to those areas in which you do now have strict liability, and no limit on damages?

Mr. FREEMAN. I think it is, sir. I think, to come back to Minnesota——

Senator MITCHELL. No, no, I'm not talking about this—other areas of the law. Are there not areas of the law in which strict liability is imposed without corresponding limits on liability?

Mr. FREEMAN. There are very few. Most of the areas where strict liability has been imposed, it has been, in part, a part of an administrative system where you have had limitations on damages. It may be that in areas like workmen's comp, the system has gotten out of whack and needs to be reformed so that the damages that are awarded are more realistic and fairer; but under those types of systems, normally you do not have awards for pain and suffering or for other what I call "subjective damages."

Senator MITCHELL. And you are opposed to the inclusion of any compensation for pain and suffering?

Mr. FREEMAN. I think that you——

Senator MITCHELL. Under any compensation scheme?

Mr. FREEMAN. I will say this, I think you clearly have to outlaw punitive damages. I think they've wrecked the whole asbestos litigation, but when it comes to pains and suffering, in the Superfund Study Commission, Senator, Judge Breitel, Professors Anderson and O'Connell and I addressed the problem of subjective damages in a brief statement which we sponsored. We though that if it is a part of an administrative system which was, of course, the Superfund recommended system, then certain award for special types of pain and suffering were appropriate. But we thought that they should be on the basis of some sort of legislatively determined schedule rather than to leave them open ended. We felt that if you left them open ended and to the discretion of the jury, that the economics of the system might break down.

Senator MITCHELL. Well, Mr. Freeman, if a man is walking down the street and a car drives onto the sidewalk and strikes him and he is seriously injured, he is entitled to recover for pain and suffering, is he not?

Mr. FREEMAN. Yes, sir.

Senator MITCHELL. Do you think that should be changed?

Mr. FREEMAN. No.

Senator MITCHELL. Now, if the same man is walking down the street and a toxic chemical is spilled on his head, and we have a creative cause of action here, should he not be entitled to recover for pain and suffering?

Mr. FREEMAN. If the toxic is spilled on his head because of negligence, yes that is because that's the whole basis of the rational in the law which gave rise to pain and suffering and these punitive damages under the traditional tort system. Where you impose liability under those circumstances, the person has done something against the norms of society and, in effect, this goes back to the ancient origins of the law as a way of avoiding an eye for an eye and a tooth for a tooth.

Senator MITCHELL. So if a Federal cause of action were created which applied substantive State law, you would either want no strict liability or, if one existed, then a cap on damages?

Mr. FREEMAN. Yes.

Senator MITCHELL. Is that a fair statement?

Mr. FREEMAN. Yes.

Senator MITCHELL. Mr. Margulies, do you disagree with that?

Mr. MARGULIES. Why bother? Why have the Federal cause of action?

Senator MITCHELL. Because there is a lot of evidence that it takes a long time through the States, have you tried cases in both State and Federal courts, Mr. Clay?

Mr. CLAY. Yes, sir.

Senator MITCHELL. He could perhaps address that; he may already have, for all I know. Why do we now permit some people to go into Federal court, and others into State court? Do you think we ought to eliminate that?

Mr. MARGULIES. I don't address that.

Senator MITCHELL. But, I mean, that's the logic of your position.

Mr. MARGULIES. I don't know every position where you now permit them to go into Federal court with a substantive cause of

action, but if you're satisfied with the State substantive thing and all you're doing in the Federal court is adopting State substantive law, leave it as a forum. You've already got it in diversity matters. Why do you need that same cause of action in a Federal court? Because the State courts are overloaded? So are the Federal courts.

Senator MITCHELL. They're not nearly as overloaded as the State courts; and second, we do it in many other areas.

Mr. Clay, do you want to address that?

Mr. CLAY. Well, if we focus not on which court we're going to litigate in but whose substantive rule we are going to apply, because I think everybody will concede we are going to litigate some, if not most of these cases in Federal court, probably at the diverse defendant's, the foreign defendant's insistence; that is, if the plaintiffs went ahead and filed in State court, the company from out-of-State would immediately remove it. I know very few corporations who are eager to litigate that sort of claim in State court unless they have perceived that there is a mechanical roadblock or a mechanical bottleneck that is going to enable them to stop the litigation dead in its tracks forever if they keep it in State court.

So let's assume that what we're talking about for the moment, at least, is what standard you are going to apply to measure whether or not the defendant's conduct was wrongful in a Federal court action; and the debate is, should we create a new standard? Or should we rely on each of the States to provide their own standard? And I submit that we should create a new standard, that we should have a uniform standard because it is a national problem and it is one with respect to which predictability and a level of assurance as to what the consequences of conduct are going to be are important if we are going to accomplish the broader remedial objectives that are the purpose of the legislation.

As to what that Federal standard ought to be, whether it ought to be a strict liability standard or absolute liability standard or whether we ought to require proof of negligence, there is fair debate on that subject. I submit that the debate is somewhat less significant than it appears to be because I think in any case in which the plaintiff is trying to recover damages from a jury, he's going to prove every act of negligence he can get his hands on, and that in every case, the defendant is going to come in to show how free from negligence he was, and that the jury's verdict will ultimately reflect the degree of care utilized by the defendant in conducting his operation.

But assuming that the debate is a legitimate debate as to which standard of care will apply, we have, under the Sherman Act or under the securities law, decided that certain conduct is so undesirable that anybody who engages in that conduct, if he causes damage to an individual, will be responsible for it. That's the debate. Is it so undesirable to release toxic chemicals into the environment in such a manner that they cause injury to people, that we are not going to give the responsible party the opportunity to come in and say, "Well, I was doing the best I could," or "I was doing it the way everybody else was doing it, and therefore I shouldn't be punished?" That's a fair debate. I'm not suggesting that that's a simple question that can be easily resolved, but that's where we are.

Mr. FREEMAN. Well, I think, though, that you've got to make—the Constitution limits your choice if you are talking about preenactment versus post-enactment conduct. If we are talking about preenactment conduct, I think that, constitutionally, there are severe questions raised if you are trying to impose a new substantive Federal standard retroactively to make people liable on the basis of conduct that was not illegal nor incurred liability under the State law prior to the date of enactment.

If we can go after the date of enactment, we clearly can have a Federal standard; but I think these Federal standards, again, can be created only in a certain way constitutionally. I think under *Erie* v. *Tompkin,* it is quite clear that Congress cannot create the common law, nor, for reasons which I went into great detail at this committee a year ago on the Clean Water Act, do I think you can confer the power on the Federel courts to themselves create a new substantive Federal common law. I don't think you can revive any such Federal common law because they probably never existed in light of *Sea Clammers* v. *Milwaukee.* You can, however, spell out in a Federal statute substantive statutory law which would be uniform throughout the country. And I think that if you go about it in the right way and look very carefully at all the factors that need to be considered—and one of those factors is that in an industrial society, the question of what is blameworthy and what is not blameworthy is not that simple; there are certain industrial activities we want to continue in the United States—those activities are going to, perforce, generate hazardous waste or toxic materials. They are the price of our industrial society.

I think judge Breitel's very brief separate statement in our Superfund report was superb. The question to be asked as to those activities, and asked to the persons who are injured unavoidably in that process is "What is going to be the standard for imposing liability?"

Now, if people do the wrong thing, if their conduct violates traditional standards of nuisance or tort, then I have no problem at all in holding them fully liable in the Federal system, in the Federal courts, just like they would be held liable today under the varying laws of the States. I think the really hard problem comes with the people who are confronted with new occasions that teach new duties and "time making ancient good uncouth." It is there that from hindsight we find out that something that we thought was harmless is causing great harm, with these long latencies.

I don't think it's fair to leave those objective social costs—that is, the medical costs, the loss of wages and earnings—on the person injured. They are victims of our industrial society. I think those costs, frankly, are better spread across the industrial spectrum through a fair, workable administrative system. But if Congress elects to let the tort system try to remedy those wrongs rather than go to the administrative system, then I think it's got to engage in the careful balancing and address the various issues that I raised in my testimony.

Senator MITCHELL. The problem with that, Mr. Freeman, is, as you very well know, extreme opposition generated here by creating a Federal cause of action would be multiplied in intensity many times over by the suggestion of a national administrative scheme.

Can't you just hear "new bureaucracy," "getting the Government off our back," and all of the other slogans of the day being raised against that?

What you are saying, in effect, is "well, here's this better mechanism over here," when you know very well that in the existing climate, that allegedly better mechanism has no prospect of enactment because it arouses all of the political slogans of the day. And so it is an empty statement.

Mr. FREEMAN. Well, 10 years from now, sir, when you're still sitting here and perhaps much farther around this table, and if some of the rest of us survive that time and we're sitting here discussing this issue, I think the principal problem that you are going to be confronting politically is that the American people are sick and tired, indeed fed up with the gross abuses of our litigative system. And I think that those of us who are lawyers here are going to have to come in under police escort, whether we are plaintiffs' lawyers or defendant's lawyers, because there has been so much abuse and waste in that system. And part of that is not only the so-called transactional costs; it is also the law's delay, the delay in compensating people. And I think that was one of the reasons why I was led to—let's put it this way, I stuck my neck out as a lawyer in private practice in endorsing a recommendation for the administrative scheme in our report, and so did many of the other lawyers in our study group. We did it unanimously because we felt that what was really needed in the majority of these cases, those smaller claims under $50,000 or $75,000, was prompt, immediate, and direct relief to people. The assurance that they would get that relief would also aid us in siting plants, in siting waste disposal facilities, and we felt that was necessary to the ongoing economy.

Senator MITCHELL. Well, I don't disagree with that at all since we're engaging in speculating on future attitudes, something with respect to which we all have a very limited ability. I think that the only thing people will become even more outraged about is the repeated and increasing instances of men and women who are injured, who see their children injured and with death resulting—killed, in effect—and who see all of their assets, usually a home, suddenly rendered without value, and who are powerless to deal with it. And that is likely to increase, and that is likely to increase outrageously. It has been said here this morning, "Well, people say since one aspect, one institution failed, let's turn to us to do something," yes, that's right; exactly what this is all about. And as society grows, becomes more diverse, more industrial, and as its conduct that previously was regarded as not harmful proves to be harmful, we have to deal with it. If that's not what we're here for, then I don't know what we're here for.

Mr. FREEMAN. Well, I do think that there's a real difference between what happened prior to your passage of RCRA and Superfund and Clean Air Act and Clean Water Act and the Clean Drinking Water Act, the kind of conduct that went on in the industrial society then versus having to live with the new rules and regulations——

Senator MITCHELL. But, Mr. Freeman, every person, every group—I'll say virtually—who opposed this, opposed all of those laws with the same arguments over and over again. Whenever en-

vironmental law has been proposed, precisely the same arguments were made that were made here today—I read the transcript. What Mr. Margulies has said here has been said over and over again. We don't know what the cost is going to be, so don't pass the Clean Air Act. We don't know what the cost is going to be, so don't pass the Clean Water Act. Don't pass the Safe Drinking Water Act. Why do we need it? The same arguments by, in many cases, the same institutions and groups. Every single time. And so you develop a certain "crying wolf" attitude, and that's the problem. There is a serious problem here that must be dealt with. Maybe this isn't the way to do it; this is an imperfect proposal, and I'm the first to acknowledge that. It has to be improved.

But what bothers me is this attitude that is not one of acknowledging a problem and trying to deal with it, but obstruction and delay and blockage and stopping and "let's not do anything." And that is the most disturbing thing; the only thing more disturbing than that is how long I've kept you people here, for which I very much apologize.

I do have a large number of questions which I will submit in writing. I'm sure you all do understand I was at another committee meeting, and that's why I couldn't be here.

I thank you all very much for your contributions today.

[Whereupon, at 12:36 p.m., the committee was adjourned.]

[Statements submitted for the record, responses to written questions, and the bill S. 2892 follow:]

Department of Justice

STATEMENT

OF

RICHARD K. WILLARD
ACTING ASSISTANT ATTORNEY GENERAL
CIVIL DIVISION
DEPARTMENT OF JUSTICE

BEFORE

THE

SENATE ENVIRONMENT AND
PUBLIC WORKS COMMITTEE

CONCERNING

THE CREATION OF A FEDERAL CAUSE OF ACTION
IN SUPERFUND REAUTHORIZATION LEGISLATION

ON

JULY 31, 1984

34-870 O - 84 - 63

I am pleased to be here today to discuss the creation of a federal cause of action for persons harmed by hazardous substances as proposed in H.R. 5640, the Superfund Reauthorization Act recently reported by the House Committee on Energy and Commerce and in the staff draft reauthorization bill recently released by your staff.

The House bill provides that an individual may sue the owner or operator of a hazardous waste site or the generator or transporter of hazardous wastes under federal law for personal damages including property damages, medical expenses, pain and suffering and lost wages or impairment of earning capacity. The bill establishes strict liability as the appropriate standard and creates joint and several liability. This means that any of the parties potentially liable under the act could be liable for the payment of all damages, with proof only of exposure to the hazardous substance and a causal connection between the exposure and the alleged injury. No negligence or fault on the part of any defendant need be proved.

The Senate staff draft establishes a similar cause of action; however, it does not explicitly adopt strict, joint and several liability. Because the amendment would be attached to Sec. 107 of CERCLA, however, which many courts have interpreted as requiring strict, joint and several liability, it is likely

that this will be the standard applied by the courts if the Senate bill is adopted. The Senate staff draft also makes significant changes to the Federal Rules of Evidence, greatly expanding the types of evidence deemed relevant to the issue of cause of injury. Finally, the draft bill appears to encourage class actions by creating class certifications for any group in excess of thirty.

The federal cause of action under either bill would not supplant any remedies now available under state law or, indeed, under any federal common law theory.

We have serious reservations about the creation of a federal cause of action in this area.

The law defining liability for exposure to toxic substances has rapidly developed in the last decade. The legal principles that are currently being developed by the courts to compensate victims of exposure to hazardous substances apply to cases involving not only hazardous wastes, but also radiation exposure, occupational disease, pesticide and herbicide exposure and other tort claims involving allegations of chronic, long-latency diseases. Passage of a federal statutory cause of action will tend to freeze the efforts of the courts and the states to develop new, more efficient ways to provide

compensation. It is our view that this development of tort remedies in the courts should be allowed to proceed without the imposition of a federal statutory cause of action so that the effects in terms of recoveries to injured parties, the costs of the use of the tort system and the economic effects of various theories of liability can be more fully understood. At this time, our knowledge is simply too limited to enable us to predict the impact of this legislation. We note that the Section 301(e) Study Group, established under CERCLA, unanimously chose not to recommend the establishment of a federal cause of action for toxic exposure.

We have several specific comments on the federal cause of action provisions in the bills.

The House bill applies retroactively to damages incurred in the last ten years if claims are filed within three years of enactment. This sort of retroactivity, in terms of creating a federal cause of action, when combined with the use of strict, joint and several liability, raises significant fairness questions, especially since it is doubtful that insurance coverage could be obtained for such retroactive liability.

In addition to recovery for personal injury, both the House and the Senate draft bills permit recovery for injury to

property including "diminution of value". The concept of diminution of value is difficult and potentially wide ranging in application. Diminution of property values could occur in the context of sites where hazardous wastes have been deposited -- even where there is no real hazard posed to nearby property owners. This could be an extremely costly provision, with much of the money going to those who have not suffered real loss instead of those who have suffered injury from exposure to hazardous substances.

Furthermore, although the cause of action created by the House bill purports not to apply to occupational exposure, thereis considerable doubt whether a worker who is unable to recover through his workers' compensation system may not still have standing to pursue recovery under the cause of action. The Senate draft bill is silent on this point; however, because it amends Title I of CERCLA, which specifically does not cover releases occurring in the work environment, it may not establish an alternate remedy for workplace exposure.

The Senate draft bill alters significantly the Federal Rules of Evidence, with regard to admissibility of evidence, and expands the availability of class actions. For example, the draft bill requires admission of epidemiological studies without regard to the size of the sample. No basis for creating these

exceptions to the rules of evidence -- rules carefully developed to protect the integrity of the judicial fact finding process -- has been established. Further, the exceptions, such as the one cited, appear to severely limit the ability of the court to utilize the best standards of scientific review in evaluating the probity of evidence before it reaches the jury.

The Senate draft bill also would require class certification if the class of claimants from a release exceeds thirty. We believe that this is an unwarranted intrusion into the prerogatives of the courts in handling these claims. For example, this provision may pre-empt judicial consideration of a matter as fundamental as the adequacy of the class representative. The section of the Federal Rules of Civil Procedure applicable to class actions, Rule 23, is intended to permit the courts to balance the advantages of class actions, such as economy in litigation, with the disadvantages, such as the party's waiver of its ability to proceed independently and the accompanying acceptance of the arguments and strategy of the class representative.

Finally, the legislation may be interpreted to permit suits against the federal government. In the House bill, this problem stems from the failure of H.R. 5640 to clarify the applicability of the waiver of sovereign immunity found in section 107(g) of

CERCLA and the failure to define specifically the term "persons" under CERCLA. In the Senate draft bill, this result may be even more certain because the definition of "persons" in Title I of CERCLA specifically includes the federal government and because, again, the legislation does not specify whether the waiver of sovereign immunity in Title I is to apply to this section, as it would appear to do given the fact that the cause of action is drafted as an amendment to Title I. The bills would appear to expose the United States to substantial new tort liability outside the carefully considered framework of the Federal Tort Claims Act (FTCA). This would be in addition to existing liability through third-party claims under the FTCA or under implied contract theories. That this liability alone is significant is illustrated by the experience of the United States in the ongoing asbestos litigation, where the government's exposure to just one defendant, Johns-Manville, has been estimated to run as high as $16.5 billion.

If this legislation permits suits against the United States, it would, for the first time, make the United States liable under a strict liability theory. In addition, the United States would be jointly and severally liable, making the taxpayers of the United States responsible for paying for the deeds of others in the context of court litigation. Considering that the United States is the ultimate "deep pocket" this litigation may constitute a severe drain on the Treasury.

The standards of the FTCA represent a comprehensive scheme for the recovery of monetary damages against the United States. Congress has consistently taken extreme care when determining where sovereign immunity should be waived, the circumstances of the waiver and the standard to be applied. The FTCA is a limited waiver of sovereign immunity. For example, currently, liability does not arise under the FTCA solely by virtue of United States ownership of an inherently dangerous commodity or property or by its engagement in ultrahazardous activity. The caution in this area emanates from the concern that expanded and unpredictable remedies against the United States will result in enormous additional cost to the federal taxpayer. Additionally, the FTCA includes certain jurisdictional defenses which insulate discretionary military and policy matters from tort liability and which are vital to the proper functioning of the government. The FTCA permits suit against the United States only in federal court and requires the use of an administrative claims procedure which has proven useful in eliminating unnecessary litigation.

Thus, not only would application of this provision to the federal government have vast fiscal consequences, but, if the cause of action applies to the federal government on the same

terms as it applies to the private citizen, it would upset the carefully designed procedural and substantive rules applicable to the government. There is constant pressure to liberalize the FTCA for one group of litigants or another. Creation of federal liability in this context will only increase the pressure to broaden federal liability piecemeal, at great cost to the taxpayer.

We believe that the Congress must carefully consider the broader societal implications of the creation of a federal cause of action in this area. As we have discussed above, the tort law in this area is new and is rapidly evolving to meet new situations. At the same time, it is becoming apparent that there are significant transaction costs to the use of the tort system to compensate victims of exposure to hazardous substances. The Rand Corporation study of the costs of asbestos litigation showed that, of every dollar paid by asbestos manufacturers and insurers in judgments to injured parties, approximately two-thirds was drained away in attorneys' fees and litigation costs. This suggests that the proposal will not necessarily provide the intended assistance but, rather, will benefit primarily the lawyers and others involved in the litigation process.

Furthermore, Congress is shifting to the courts questions involving the allocation of vast resources with only very

general guidelines as to who is to benefit from this shift of resources. In view of the finite resources available to deal with the many problems society may have, we believe that the Congress should give far more detailed consideration to who actually should receive benefits, and how these benefits can be awarded without consuming two-thirds of the benefits in transaction costs.

Whether this resource allocation is accomplished by the tort system or by a direct government payment, the Congress must understand that it is causing the allocation of significant social resources. The monies must be spent carefully and must be allocated through the most efficient means available. We have too many serious reservations about the ability of the tort system to do this to support this proposal. And we believe there is sufficient scientific uncertainty about the relationship of disease to different types of exposure to give Congress pause in allocating these resources on the basis of standards which, in general are clearly designed to favor an award -- an award which may end up benefiting primarily the attorneys and not the injured claimant.

Finally, as you are aware, this legislation raises many significant issues in addition to the federal cause of action. The Department, through its Lands and Natural Resources Division, plays a major role in the enforcement of CERCLA's provisions. We have prepared a report on the House bill addressing these issues and can make it available to the Committee. We will also be reviewing any action of this Committee and, if you request, can submit a report reflecting our analysis to you.

STATEMENT OF
IRVING P. MARGULIES
GENERAL COUNSEL
UNITED STATES DEPARTMENT OF COMMERCE

BEFORE

THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ON

AMENDMENTS TO
THE COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT OF 1980

July 31, 1984

Mr. Chairman and members of the Committee, thank you for this opportunity to express the views of the Department of Commerce on the "Federal cause of action" provision recently circulated by your Committee staff in connection with the reauthorization and amendment of the Superfund statute. My comments will also discuss other sections of the proposals recently made by the staff of your Committee as they relate to the "Federal cause of action" provision.

The Department of Commerce supports the goal of ensuring compensation for damages due to "toxic torts," as well as maintaining laws that foster the safe manufacturing, shipment and disposal of hazardous substances. However, the "Federal cause of action" provision being considered by your Committee would very likely work against both of these important goals, while at the same time imposing extremely heavy, non-productive costs upon U.S. industry, and ultimately upon consumers and the economy.

The expansive entry of the Federal Government into the field of tort law that would be mandated by this proposal is certainly unjustified. Whether the Federal Government should undertake some limited expansion of its role in this field remains to be determined. At this time, no need for such intervention has been identified or defined.

The "Federal cause of action" provision would amend section 107(a) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA") to create a new Federal cause of action for personal or property damage from releases of hazardous substances. The "strict" or "absolute" liability features of the present section 107(a) would apply, as would its fixing of liability upon any person in the chain of shipment or handling of a hazardous substance that is released and causes damage. It would provide broadly defined new categories of damages to be recoverable through private-party suits under CERCLA. Related provisions would provide certain unusually liberal evidentiary and procedural rules. Also, a three-year statute of limitations would be applied to actions under section 107(a), except that for the first three-year period under the provision, actions could be brought without limitation.

The following are some of the salient characteristics of this proposal that are unusual and, in our view, highly questionable:

-- The provision would heavily involve the Federal Government in an area traditionally within state jurisdiction, despite a lack of evidence of an interstate or national problem that cannot be effectively addressed by the states;

-- It would neither modify nor replace the existing system of state "toxic tort" laws, but would overlay it with a costly new system of Federal law and litigation;

-- With no evident basis in judicial experience, and without the benefit of legislative hearings, it would establish untested rules of evidence and procedure different from those of the Federal Government in any other area of law, and apparently different from those of any state;

-- It would graft retrospective and punitive provisions onto a statute basically designed to ensure current and prospective environmental values;

-- It would apply strict standards based on "nuisance" and product liability concepts to the "toxic tort" field, which has very different characteristics calling for different rules and standards;

-- Without justification by special circumstances, it would impose an extreme form of "strict liability," i.e., liability regardless of fault, upon parties providing necessary goods and services to the public, thus imposing heavy costs and

burdens ultimately to be borne by U.S. citizens and consumers; and

-- It would create liabilities that for at least three years would have unlimited retroactive effect, thus causing serious business dislocations and frustrating state statutes of limitations wherever they now apply to the conduct covered by the proposed new Federal statute.

Specific problems with the proposed "Federal cause of action" provision are discussed below.

I. The Need for a "Federal Cause of Action Provision" Has Not Been Demonstrated

Under our Constitution, the role of the Federal Government vis-a-vis the states is inherently limited. In keeping with that concept, and as a matter of sound administration, we believe that the Federal Government should exercise restraint in asserting control over matters normally within state jurisdiction. Federal authority should be interposed only to meet a demonstrated need, and the intervention should be as limited as possible to achieve its purposes.

The creation of a new Federal cause of action in the tort field would be an exceptionally broad intervention into an area traditionally within state jurisdiction. Especially when Federal courts are burdened with large and growing caseloads, such an initiative should be rejected absent a substantial showing: (1) that a problem exists that is nationwide in character or that significantly burdens interstate commerce; (2) that state legal systems cannot deal with the problem; and (3) that the benefits of the Federal remedy would outweigh its costs.

We are persuaded that the need for an extension of Federal jurisdiction to provide for individual "toxic tort" suits has not been demonstrated.

During consideration of CERCLA by the 96th Congress, supporters of the legislation lobbied for provisions granting private rights of action for so-called "toxic torts." Congress ultimately decided that a need for such provisions had not been demonstrated.

However, it did authorize a study under section 301(e) of CERCLA to resolve the issue of the adequacy of existing legal remedies in this area. The "Section 301(e) Study Group," working with the American Bar Association, the American Law Institute, the Association of American Trial Lawyers and the National Associa-

tion of State Attorneys General, unanimously decided not to recommend a new Federal cause of action.

We are unaware of any evidence or developments since the Study Group made its report that would contradict its conclusions. There is no indication that damages from toxic waste treatment or disposal have reached, or threaten to reach, such proportions as to present a "national" problem requiring a Federal solution. Further, we know of no reason to believe that state legal systems are inadequate or ineffectual in assuring compensation for damages from toxic substance releases. Indeed, recent court decisions would suggest the contrary.

Congress has made no significant investigation of the need for Federal intervention into the field of toxic torts since the study authorized be section 301(e) was completed. Although hearings before the House Energy Committee earlier this year touched briefly on this topic, it has not been taken up by any Committee of the Senate and has not received detailed treatment in either body. Thus, the record before the Congress on this issue remains as it was when CERCLA was enacted. That is, no substantial evidence shows a need for Federal intervention into the field of toxic torts, let alone for the creation of an entirely new Federal cause of action.

It may be helpful to consider the scope of Congressional fact-finding done to substantiate the soundness of recent proposals for reform in the area of product liability. The Administration's support for a Federal uniform product liability law is based on the accumulated evidence of almost ten years of Congressional hearings and a multi-year, comprehensive study of state product liability law sponsored by the Department of Commerce demonstrating a significant burden on interstate commerce stemming from a persistent lack of uniformity among state laws in that field.

Even though the Administration has concluded that in the product liability area a national problem exists that cannot adequately be resolved by the states, its support for Federal reform is contingent upon the continued handling of product liability suits by the state courts, with no new Federal jurisdiction being established. This is consonant with our view that Federal intervention into areas traditionally within the purview of the states should be as limited as possible consistent with resolving identified national problems.

In contrast, the provision under consideration by your Committee would call for a whole new body of "Federal common law," despite

the lack of substantial evidence that Federal intervention is necessary, and with no apparent consideration of less expansive alternatives. The risk of enacting unworkable, counterproductive legislation is further increased when the public -- including the community most immediately affected by the legislation -- has had little or no opportunity to present its views. Congress cannot responsibly enact sweeping Federal legislation in the complex and important area of tort liability for hazardous substance releases based on the meager factual record now before it.

II. The Broad, Untested Legal Standards for Tort Liability Imposed by the "Federal Cause of Action" Provision would have Extensive but Unknown Economic Consequences.

The "Federal cause of action" proposal would not only open the Federal courts to the litigation of private claims for toxic tort damages, but would create new substantive and procedural rights greatly extending the exposure of U.S. business and industry to potential tort liability. The full extent of this liability is unknown, in part because the Federal "common law" needed to define the broad standards in the provision would need to be developed over a period of years.

Among the types of damages recoverable under this section would be the loss of income, profits, and earning capacity; pain and suffering; and economic damage to property including diminution in value. Many of these damages ar expressed as resulting from "personal injury", a term not defined elsewhere in CERCLA that is susceptible of varying and expansive interpretation. Adoption of this term could permit the recovery of medical costs such as those resulting from "mental anguish" or "pain and suffering" where no physical injury has occurred -- a result contrary to the law of most states.

Assuming that a need for Federal standards of liability were shown, some of the standards in the staff draft might be appropriate subjects of legislative hearings. On the spur of the moment, and without benefit of review by experts in the relevant fields, we cannot evaluate all of the new legal standards suggested by the staff of your Committee. Nor can the Congress. However, we are sure that the abrupt enactment of hastily considered Federal standards of liability would disrupt business planning and increase the cost of producing many U.S. goods.

III. The Imposition of Liability Regardless of Fault for So-Called "Toxic Torts" would Produce Inequitable, Harsh and Capricious Results.

The "Federal cause of action" provision does not itself specify a standard of "strict" or "absolute" liability. However, a number of courts have held that such a standard applies to section 107(a) of CERCLA, which would be the framework for the new provision.

Under a strict liability standard, a plaintiff need not prove negligent or unreasonable conduct on the part of the defendant. Nevertheless, to avoid particularly harsh effects, states have sometimes modified otherwise strict liability concepts to permit various defenses. Under CERCLA, liability requires only a hazardous substance release coupled with the mere fact of ownership of vessels or facilities or involvement in some phase of the transportation, storage, treatment or disposal of the substance -- including simply making arrangements for any of these actions. The only defenses permitted are that the release and the damages were caused solely by (1) an "act of God;" (2) an act of war, or (3) an act or omission of a third party unrelated to the entire chain of shipment, storage, et cetera.

This extreme form of strict liability is at least arguably appropriate for the special purposes of section 107(a) of CERCLA as enacted. Under that provision, however:

(1) the only plaintiffs permitted are government entities;

(2) the degree of potential liability, while high, is comparatively limited;

(3) there is rarely any doubt about the cause of the damages claimed -- e.g., that a hazardous substance release required expenditures for cleanup;

(4) the types of damages recoverable are generally subject to proof and rebuttal by objective evidence; and

(5) the overall purpose of the law is of an urgent nature -- i.e., to abate dangerous nuisances that continue until dealt with.

The "Federal cause of action" provision has very different characteristics and responds to entirely different circumstances. Comparing the two provisions as to each of the factors listed above, we find it difficult to believe that strict liability

standards in this new context can be seriously proposed. Consider that under the "Federal cause of action" provision:

(1) Any number of plaintiffs would be allowed to sue a particular defendant at different times. Even if plaintiffs were to know and be able to identify the party or parties actually at fault, they could still elect to sue a more convenient party or one with a "deep pocket."

(2) The degree of potential liability for defendants is unknown, but very large. For the first "deep-pocketed" defendant successfully sued with respect to a given major incident, the liabilities could be enormous. Since all jurisdictional facts as to that party would have been established, it would be the prime candidate for suit by other plaintiffs.

(3) There is a significant likelihood of error in finding "causation" -- i.e., that a toxic substance release produced, say, a disease, as opposed to cleanup expenses. Courts do make mistakes, or at least "questionable" findings of fact, especially in making difficult "judgment calls" on complex issues. Parties who could prove that they were not responsible for a release should not be subjected to a significant risk of being held liable for conduct that was not only reasonable and prudent -- but that did not cause the damages complained of.

(4) The types of injuries proposed to be compensible include many that are highly speculative and subjective.

(5) The "Federal cause of action" provision is of a non-emergency nature.

"Strict liability" standards not only tend to be harsh and capricious, but they also tend to reduce incentives toward safe practices. Since suits can be brought against parties not at fault, the "cost" of one party's negligence in terms of potential tort liability is in effect syndicated among a group.

IV. Joint and Several Liability Would Also Likely be Counterprodutive in the area of Toxic Torts.

Based on recent court decisions, the concept of "joint and several liability" would also probably apply in actions brought under the Federal cause of action provision. This means that any defendent could be held liable for all of the damages from an incident involving the release of a hazardous substance. Considering that such a defendant need not even have been at fault with respect to the incident, the result can be extremely harsh.

The considerations mentioned above in connection with "strict liability" also apply to this feature of the staff proposal. The Federal cause of action provision would allow extremely large potential judgements against a wide range of potential defendants, many of whom may be small business concerns unable to furnish more than a small fraction of the total damages. In turn, such defendants would face impossible obstacles in seeking contribution or apportionment, since the burden would be on them to identify other "tortfeasors" and quantify proportional damages. The gross inequity of such potential results is obvious.

IV. A Punitive Damages Provision is Inconsistent with the Aims of CERCLA.

Punitive damages make no sense under a scheme of strict liability. One of the main benefits of strict liability, if not its chief advantage, is the avoidance of the cost and time involved in adjudicating the reasonableness of a defendant's behavior. Since assesment of punitive damages without such an inquiry would deny a defendant's due process rights, the actual use of a punitive damages provision would require foregoing the clearest benefit of the concept of strict liability.

We also believe that punitive damages have no place in the general scheme embodied by CERCLA. Punitive damages are not really "damages" in the sense that they compensate plaintiffs for losses they have incurred. Rather, they are akin to criminal fines, but are paid to private plaintiffs rather than to the state. Punitive damages are at best a crude device to achieve their purpose. They have no place within our comprehensive national scheme for ensuring environmental quality, which includes several major regulatory statutes. This system already provides not only for damages for such losses as the cost of cleaning up hazardous waste disposal sites, but also for civil and criminal sanctions for regulatory violations. In this context, punitive damages are unnecessary because they duplicate other sanctions much better designed for the deterrence of willful misconduct.

V. The "Open Season" Clause of the Statute of Limitations Provision should be Summarily Rejected.

One of the staff proposals related to the Federal cause of action provision would establish a statute of limitations providing that actions may be brought within three years after the discovery of the harm and its connection with the "release in question". Given the long latency periods often associated with exposure to toxic substances, we would favor serious consideration of

such a "discovery" statute of limitations in a toxic torts provision, assuming such a provision itself were needed.

However, the proposal would also provide that for a period of three years following enactment, claims could be brought for any eligible injury, no matter how remote in time. This feature of the statute of limitations provision is absurdly severe. It would create a three-year "open season" during which claims could conceivably be brought for damages or injuries exceedingly remote in time, perhaps even on behalf of decedents' estates for uncertain damages occurring long ago. Since the "cause of action" also provides for virtually absolute liability, joint-and-several liability and relaxed evidentiary standards, the gross abuse and injustice that this "open season" provision would provoke should be apparent without elaboration. This provision should be summarily dismissed from consideration by your Committee.

V. Congress Should Not Attempt to Fashion Rules of Evidence and Procedure on Issues Common to Many Areas of Law for the Purposes of a Single Statute.

The staff proposals contain a provision making specific types of evidence admissible as a matter of law on the issue of causation in proceedings under section 107(a). Another provision would provide a special rule for certification of classes of plaintiffs in section 107(a) actions.

We would question the wisdom of amending rules of judicial practice on a piecemeal basis at any time, but to fashion new rules of evidence on matters common to many areas of law for the purposes of a single statute -- absent some difficult-to-imagine special considerations -- cannot be justified. The specific evidentiary rules proposed in this case illustrate the danger in this general practice.

The provision, in part, reads:

> (1) In any action for damages under subparagraph (D) of subsection (a), ... the following evidence relevant to the issue of causation of personal injury or disease shall be admissible:
>
> > (1) [sic.] increases in the incidence of injury or disease in the exposed population over that which is otherwise probable;
> >
> > (2) epidemiological studies (without regard to the size of the sample);

...

(7) government health effects studies done for the purpose of developing standards or exposure limits.

From a strict legal standpoint, these provisions are merely cost- and delay-generating devices with no other effect. They simply require the admission into evidence of certain types of studies whenever the causation of injury or disease is at issue. They do not, and could not without depriving parties of due process, require that such studies, once admitted into evidence, be considered relevant and probative as to the specific issues in any particular case. Applied properly, these provisions would have no other effect than to require that certain evidence be in a trial record.

In practice, however, the fact of Congressional enactment of such provisions could easily be taken to indicate that Congress has stated its intent that such evidence be considered probative, at least to some degree. Even if this were a correct assumption, however, implementing that Congressional intent would be error. To whatever extent any court were to consider a fact proven by certain evidence because Congress would like such a result, it would to that extent deny due process.

The drafters of this provision must have envisioned its having some effect on the decisionmaking process; a court could make the same mistake -- which is why we believe the provision should not be enacted. If the provision were to have any effect, aside from generating cost and delay, that effect would be the covert achievement of a legislative purpose that could not be achieved openly.

VI. The Combined Features of the "Federal Cause of Action" Provision Would Likely Create Uninsurable Liabilities and Involve "Transaction Costs" Possibly Exceeding Damage Recoveries.

Enactment of the many hastily-conceived, untested "reforms" associated with the Federal cause of action provision, in combination, would immediately impose upon many U.S. industries an exposure to enormous potential liabilities. This is not mere rhetoric or exaggeration. Commenting on the impact of state tort liability law, which the drafters of this provision clearly feel is not nearly favorable enough toward plaintiffs, Professor John Kircher says:

> Arbitrary and encompassing liability, such as that which results from the abrogation of strict causation and identi-

> fication requirements, clearly poses severe and potentially debilitating economic problems for manufacturers. The increasingly large judgments obtained in DES cases have exposed manufacturers to crushing liability for conduct which when originally undertaken posed no unreasonable risk of harm to others. Similarly, the cost of damages in asbestos cases may come to billions of dollars and transcend the financial capacity of the industry, insurers, and government-funded programs. (Federal Product Legislation and Toxic Torts: the Defense Perspective, 28 Villanova L. Rev. 1116, 1130 (1982-3))

The liabilities discussed above were termed "monumental." Those threatened by the proposal now under consideration are clearly greater yet. Neither the full extent of this exposure for an industry, nor the portion that particular companies would face, can be estimated with sufficient confidence to permit industries to insure against that exposure.

In correspondence to your Committee and other Congressional committees handling the Superfund reauthorization, the American Insurance Association has made this problem clear. Our review of the legislation convinces us that the insurability problem would be real. We wish to emphasize its importance. Sound business decisions depend on the ability to predict the costs involved in producing goods and services, and a key tool for making this possible is insurance against poter ial liability.

The last issue I would like to address is the cost of implementing the "Federal cause of action" proposal.

A major factor to be considered is transaction costs -- the "friction" in the system whereby a dollar of compensation will be delivered to a toxic tort victim. Given the uncertainties involved, including the eventual interpretations courts would give to the various features of the proposed cause of action provision, the transaction costs of the system cannot be very accurately estimated, but they would be extremely large. A recent study by the Rand Corporation of asbestos litigation, for example, found that nearly two-thirds of every dollar paid out in damages went to attorneys' fees and other litigation expenses. An additional type of transaction cost under the new provision would be that of setting up and administering the Federal court mechanisms through which it would operate.

Taken together, the various costs involved in simply making the proposed Federal cause of action provision work would likely approach or even exceed the total dollar amount of recoveries.

The costs just mentioned, however, are by no means the total of the "costs" that should be weighed against the "benefits" of the proposal in judging its soundness. To these should be added the detriment to society caused by tying up part of our resources in non-productive activity and saddling U.S. industry with heavy costs ultimately to be borne by the consumer. As to the "benefits" of the proposal -- none have been shown, since there is no substantial evidence that a national problem exists that the Federal Government can handle any better than the states are handling it now.

These major problems do not relate to any single provision of the "Federal cause of action" proposal, but to the potential impact of the various elements of that proposal taken together. They cannot be addressed by isolated drafting changes or any "quick fix," but only by awareness on the part of the Congress of the full implications of the "Federal cause of action" provision as a whole. We believe that a full appreciation of those implications would compel rejection of the entire proposal as it has been conceived and put forward.

That completes my statement. I will be pleased to answer any questions .

Thank you.

GENERAL COUNSEL OF THE
UNITED STATES DEPARTMENT OF COMMERCE
Washington, D.C. 20230

SEP 4 1984

Honorable Robert T. Stafford
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

I appreciate having had the opportunity to appear for the Department of Commerce in your recent hearings on the "Federal Cause of Action" proposal that has been linked to the Superfund re-authorization.

This letter responds to a question directed to me in writing after the hearing by Senator Simpson. His question concerns the specific adverse effects this Department foresees from adoption of the Federal cause of action proposal, and the type of analysis that should be undertaken before such a proposal is adopted. Since the proposal has been amended in various ways since the hearing, I will need to discuss those amendments and address Senator Simpson's question in the context of the most recent version, introduced as part of S. 2892.

Specific changes in the proposal made since the July 31, 1984 hearings are discussed in the attached "Supplementary Comments," which I request be made a part of the record. While some of those changes are helpful, the proposal continues to require an expansive Federal intervention into an area traditionally within the domain of the states, with no clear justification. It remains an inadequately considered initiative likely to have serious adverse effects and produce few if any benefits.

Senator Simpson's question:

> Mr. Margulies, you have stated that this Committee has not sufficiently studied the potential effects of a Federal Cause of Action. Could you be more specific about those adverse effects, and identify the kind of analysis we should undertake before adopting a Federal cause of Action?

To get some idea of the effects of the proposed legislation, one must first analyze the differences between the rights, duties and liabilities imposed by the "toxic torts" laws of most states and

those embodied in the Federal proposal. Specifically, what new rights, duties, and liabilities would be created? Fairly extensive "raw data" on the provisions of state laws in this field as of 1982 were developed by the "Section 301(e) Study Group" and are contained in various appendices to its report. However, the record before your Committee to date contains no identification or analysis of the changes in law intended by this proposal.

The procedural innovations of the proposal also need to be compared to existing procedures in the states and in the Federal courts. The proposed rules on admissibility of certain types of evidence, for example, are apparently seen as being different from those now in effect, but we are not aware of any analysis of the specific changes they are intended to make.

Without these basic comparisons, it is impossible to know the full magnitude of the burdens and costs that would be imposed by the legislation. Clearly, the intent of the proposal is to ease by a substantial degree the task of tort plaintiffs in recovering damages. This would be done, (1) by imposing, at least within the Federal court system, liability to some degree without the necessity of proving negligence or any type of misconduct on the part of the defendant; (2) by expanding the class of defendants potentially exposed to liability; and (3) by tilting in favor of plaintiffs standard evidentiary rules based on judicial experience.

The broad considerations needed to support a proposal of this magnitude were outlined very well by Judge Charles Breitel, a distinguished member of the study panel established by section 301(e) of CERCLA to review this precise question. Relevant portions of his comments on the report of the Study Group are set out in my "Supplementary Comments" because they relate directly to the full answer called for by Senator Simpson's question. The record on the need for a Federal cause of action in the toxic torts field has not substantially changed since the submission of the report of that panel.

Given the present lack of any identification of a problem requiring a Federal resolution, or of the actual changes to be made in current laws and procedures, or the development of evidence of various types to support this proposal, it must be regarded as a proposal to impose unknown but heavy additional costs on a virtually random basis upon U.S. industry, the Federal Government and ultimately upon the public. I would like to address the very real "costs" of such an approach to important legislation.

The United States regulates industrial activity to a far greater extent than any other nation among our major trading competitors. While we support regulation needed to ensure public health and

safety or maintain a clean environment, the costs of such regulation have made it increasingly difficult for U.S. industry to remain competitive. Laws imposing significant additional costs and burdens on industry should not be enacted without the most careful consideration of many factors.

Perhaps during the 1950's or 1960's, we could have afforded to place the risk of both foreseeable and unforeseeable harms from industrial activity directly upon industry itself without immediate, or very short-run consequences in terms of the ability of U.S. industry to compete not only in world markets, but in our own. Changing competitive conditions make it important to weigh very carefully any proposal to shift further costs directly onto the industrial sector of our economy.

Viewed as a whole, the Federal cause of action provisions would treat all U.S. industries connected with the production, transportation or disposal of substances, which may or may not prove to be hazardous, as if they were involved in an "abnormally dangerous activity." (See, Restatement (Second) of Torts, Section 520) That is, these commonplace industrial activities would be treated as if they were inherently so dangerous, and so non-essential to our society, that anyone who engages in them should be held liable directly, and virtually automatically, for any harms ever resulting from those activities or substances.

Concepts of "strict" or "absolute" liability, punitive damages, and the like are not new to the law or even to CERCLA. Such exceptional measures, however, should be limited to exceptional circumstances that have not been shown.

This Department is certainly concerned for people who find it difficult to obtain needed financial relief for injuries caused by toxic substances. The extent of this problem, and its causes, however, have not been identified, and alternative approaches to its resolution have not been considered. Whatever the most sensible approach to this problem may be, it certainly is not to treat a large class of normal industrial activities as if they are all highly dangerous and of questionable public value.

Sincerely,

Irving P. Margulies
General Counsel

Enclosure

SUPPLEMENTARY COMMENTS OF
IRVING P. MARGULIES
GENERAL COUNSEL
UNITED STATES DEPARTMENT OF COMMERCE

Before

THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

On

"FEDERAL CAUSE OF ACTION" AMENDMENTS TO
THE COMPREHENSIVE ENVIRONMENTAL RESPONSE,
COMPENSATION AND LIABILITY ACT OF 1980

As indicated in my earlier testimony, the enactment of a "Federal cause of action" is unsupported by substantial evidence that: (1) a problem exists that is nationwide in character or that significantly burdens interstate commerce; (2) state legal systems cannot deal with the problem; and (3) the benefits of the Federal remedy would outweigh its heavy costs. The amendments to the Federal cause of action provision made since that testimony was presented, while helpful in some respects, have not cured the major defects in the proposal nor made it unnecessary to analyze the nature of the supposed problem to be addressed by the legislation and consider its probable costs and adverse effects.

This Department's position should not be construed as primarily critical of specific provisions in the proposal per se, but of the cumulative effect of its various features. "Strict" or "absolute" liability, "punitive" damages and the like are not unprecedented in the law or even in CERCLA. However, as pointed out in our previous testimony, such provisions are traditionally, and properly, used to address unique problems and situations not applicable to the situation addressed by the present bill.

A review of the Federal cause of action provision in its most recent form (section 19 of S. 2892) demonstrates that the major defects of the idea cannot be addressed, as I have said, by isolated drafting changes or "quick fixes."

I. Analysis of Revisions of the Federal cause of action proposal contained in S. 2892.

A. Substitution of "bodily injury" for "personal injury." In stating the types of damages for which recovery would be available, section 19(b) uses the term "bodily injury" instead of the previous "personal injury." This is a helpful change, since it adopts the established term of art and avoids creating a new, vague standard suggesting the possible recovery of one type of speculative damages -- i.e., "psychic" harms in the absence of any physical injury.

B. Limitation of punitive damages to cases of conscious, flagrant misconduct. Section 107(n) explicitly limits the availability of punitive damages to cases involving named types of egregious conduct, and thus conforms the intent of the punitive damages provision to established common law concepts in the granting of such damages. This is helpful, but it in no way justifies the significant introduction of punitive damages into the statutory scheme of CERCLA. Other than the special, limited provision of section 107(c)(3), CERCLA contains no element of "punitive" damages, and general punitive damages have no place in the system of environmental regulatory statutes of which CERCLA is a part. Such a provision would duplicate civil and criminal sanctions much better designed to achieve the purpose of deterring egregious conduct.

C. Deletion of "(regardless of the size of the sample)" from provision mandating the admissibility of "epidemiological studies" on the issue of causation.

Superficially, this change would appear to be an improvement over the previous language requiring the admissibility of "epidemiological studies (regardless of the size of the sample)," because it apparently removes an invitation to the courts to consider evidence of poor quality in determining causation. In fact, the invitation remains, and the only effect of the amendment is to mask that improper invitation more subtly. As noted in my earlier statement, the major effect of the evidentiary provisions of the Federal cause of action proposal is to suggest a lessening of the standard of proof required to find causation, which raises serious due process considerations.

If the intent of this provision is not to "tilt" the standard of proof in favor of plaintiffs, but rather to shift the burden of proof from one party to another, the device of a rebuttable presumption should be considered. This assumes, of course, that there is reason to believe that the relevant information is usually in the sole possession of, or better available to, the party to whom the burden of proof is to be shifted. We know of no reason to assume that this is the case. The difficulty, and general unfairness, of defendants' having to prove lack of causation suggests that such presumptions should be used in only the most unusual circumstances and should be carefully drafted to avoid constitutional problems.

The "quick fix" of this provision illustrates the difficulty in attempting to cure the deficiencies of a basically ill-conceived idea by hasty revisions.

D. The change in the standard of liability to "strict liability without limitation to the defenses specified ...."

The earlier staff draft placed the Federal cause of action provision under the standard of liability for other damage actions under CERCLA, thus subjecting defendants to virtually "absolute" liability that CERCLA provided in response to special circumstances and conditions not applicable to the supposed problem addressed by the new provision. Various commentors, including this Department, pointed out the lack of basis for imposing such an extreme standard of liability in this instance. Specifically, it was pointed out that even when some form of liability without regard to fault is imposed by the states, it is usually subject to any of a number of possible defenses. It was also noted that such less harsh systems are often characterized by the term "strict liability" as opposed to "absolute liability," which would fairly describe the standard of liability of the original staff proposal.

In apparent response to these criticisms, the proposal has been amended to provide:

> (m) The standard of liability for any person for damages under subparagraph (D) of subsection (a)(4) of this section shall be strict liability without limitation to the defenses specified in subsection (b) of this section. (Emphasis added.)

If this change would permit the introduction of various defenses to otherwise absolute liability sometimes available in state courts, it would be a change in the right direction. However, there remains no substantial record before the Congress showing special circumstances that would justify the imposition of liability without fault in any form in the present context, and no analysis of the specific reasons for imposing such liability and thus of its appropriate limitations.

In addition, the amended provision is vague. Unlike the term "bodily injury," the term "strict liability" is not a recognized legal standard. It is merely the label for various bodies of liability law having one or more statutory or equitable defenses. Thus, the redrafted provision is not really a "strict liability" standard, but simply an instruction to the courts to fashion such a standard based on their best guess as to Congress' reasons and intent in giving this instruction. In other words, the provision is unfinished. Such incomplete legislative work would impose needless uncertainties upon litigants and add significantly to the costs of litigation until the law is eventually formulated.

E. Limitation of damages to those "resulting from harm caused by releases of hazardous substances, pollutants, or contaminants owned or possessed by such person."

This change is apparently designed primarily to limit the class of potential defendants subject to strict liability standards to those who "owned or possessed" substances that were released and caused harm. The extremely broad class of potential defendants subject to liability without fault was a particularly troublesome feature of the Federal cause of action proposal in its earlier form. Since this provision would somewhat limit the class of persons subject to liability for what may have been entirely reasonable conduct, it must be regarded as a significant improvement. However, we continue to believe that a case has not been established for the imposition of this type of liability in the present situation, especially without any ceiling on damages or a limitation of the types of compensable damages to categories subject to proof and rebuttal by relatively objective evidence.

F. Addition of "pollutants or contaminants" to the substances for whose release damages may be assessed.

The prior staff drafts of this proposal authorized damages resulting from a "hazardous substance." The present version adds the words "pollutant or contaminant." This change should not be viewed as an innocuous "conforming amendment" to bring the Federal cause of action provision into line with the terminology used in the present section 104 of CERCLA relating to "Response Authorities." Rather, it should be analyzed in terms of its appropriateness for the particular set of circumstances and concerns addressed by the Federal cause of action provisions.

The language "pollutants or contaminants" is defined under CERCLA in expansive terms to include any substance which, when released, "will or may reasonably be expected to" cause death, disease or similar harms. This definition is appropriate for a provision that triggers Federal authority to take actions or make expenditures to mitigate or avoid a serious present danger. Under section 104, the term is clearly prospective in its application -- i.e., it triggers present actions to avoid present or future harms. For the sake of safety, the inclusion of the broadly-defined term "pollutant or contaminant" is clearly justified in that context. In connection with the Federal cause of action provision, the same language could have extremely broad retrospective effects by extending the strict liability of that provision to include substances that had no known or even remotely foreseeable toxic characteristics at the time of their production, shipment, use and disposal.

II. Factors to be Considered in Evaluating Federal Toxic Torts Legislation: Remarks of Judge Charles Breitel.

The following remarks are taken from the separate views of Judge Charles D. Breitel, member of the "Superfund Section 301(e) Study Group," on the report of that panel. (Senate Committee on Environment and Public Works print, Serial No. 97-12, pp. 295-304)

4. ....[I]n this century our world, and this nation in particular, has undergone a technological revolution in which chemistry, physics, medical science and research, electronics, and mechanics, have conjoined in a bewildering multitude of uses. These have provided a contra-Malthusian profusion of affluence of nutrition, services, medication, transportation, clothing, shelter, and countless other benefits regarded as positive and even essential goods. At the same time, the terrible costs of this revolution in disease and death to human beings and equally terrible costs to the environment, have been [uncovered], some foreseeable and some not. Without a global assessment, presumed remedies may be destructive of the benefits and may not alleviate or eliminate the costs, as a matter of technology or economics.

5. More technically, in assessing the desirable and just scheme of responsibility ..., man's knowlege has to be classified. There are toxic substances and wastes which were, on any test, deemed not harmful or even beneficial at one time. And there are substances today, without any determinable responsibility, which appear to be utterly harmless or even beneficial or essential, which later, or tomorrow, will have been discovered to be toxic singly or in synergistic relation with other substances. There are also substances which for a variety of reasons should have never been used or devised without exhaustive testing .... Then, of course, there are the "easy" cases that enough was experienced or known, even if very incompletely, to have put generators of the now-questioned substances on notice of possible hazards.

6. Yet the immediately preceding discussion would still leave a gnawing residual problem. There are many hazardous substances and activities which must be balanced against the then- or presently-available alternatives. In preventing many of humanity's ills, disasters and malnutrition, elimination of hazardous substances and activities without a then-known alternative or one now known, the costs in death, disease, and environmental harm may be or have been greater than that caused by the hazardous substances and activities.

7. The point is that the pristine jungle is not a safer place for human habitation or activity than the inevitably danger-ridden civilized society, which has given us the boon (problem) of enormous growth of population with increasingly greater longevity and health.

8. Against this backdrop, I cannot accept the Report's solutions in a narrow area without relation to the overall framework in which they are to fit.

FORMAL REMARKS OF HUBERT H. HUMPHREY, III

ATTORNEY GENERAL OF THE STATE OF MINNESOTA

TO THE UNITED STATES SENATE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, D.C.

TUESDAY, JULY 31, 1984

CONCERNING THE ENACTMENT AND IMPLEMENTATION OF THE MINNESOTA ENVIRONMENTAL RESPONSE AND LIABILITY ACT, AND EXPERIENCE WITH THE CREATION OF A STATE STATUTORY CAUSE OF ACTION FOR THIRD PARTY INJURIES AND LOSSES CAUSED BY RELEASES OF HAZARDOUS SUBSTANCES

The Background of Minnesota'a Environmental Response and Liability Act

Before I begin to talk about the legislation which was passed in Minnesota in 1983 dealing with cleanup of hazardous waste sites and liability for third party injuries, let me say that Minnesota has been at the forefront of efforts to protect the public health and safety from the threats posed by the production, transportation and disposal of hazardous waste. In 1974, two years before Congress passed similar legislation in the Resource Conservation and Recovery Act of 1976(RCRA), Minnesota passed its law requiring the regulation of the transportation, storage and disposal of hazardous wastes. Later, Minnesota

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passed the Waste Management Act of 1980, mandating the adoption of a statewide plan for how hazardous wastes should be managed in the future, and setting up an open and public process to identify sound alternatives to the practice of disposing of hazardous waste in our land. This year, building upon the planning done under the 1980 law, our legislature authorized new grant and loan programs to help develop the alternatives--such as waste treatment, recycling and incineration--that we hope will minimize the need for future disposal facilities for hazardous waste in Minnesota. These laws provide Minnesota with one of the most comprehensive programs for managing and regulating hazardous substances.

Minnesota's concern about hazardous waste did not come from watching the stories about Love Canal on the television news. It came from the awareness that the groundwater resources used by Minnesota towns and cities were being contaminated as a result of improper disposal of hazardous waste. In 1981, 35 contaminated

sites were identified in our state. Today, that number has grown to almost one hundred. As the magnitude of these problems became clear in the late 1970's, we in Minnesota anxiously followed the efforts of Congress to pass cleanup and liability legislation to deal with contaminated sites.

Reasons for Creating a Statutory Cause of Action for Third Party Damages

Unfortunately, our legislative leaders were disappointed with the Federal Superfund Act passed late in 1980. While the U.S. Senate, led by the work of this Committee, tried to pass a strong Superfund bill that included a federal cause of action for third party injuries, the bill that was finally enacted did not include this provision. And the amount appropriated for the Superfund did not hold out much hope that Minnesota would get the federal assistance it needed to mount a vigorous attack on old contaminated sites.

The Minnesota legislation which was introduced in 1981, and which culminated in the enactment of the Minnesota Environmental

Response and Liability Act in April of 1983, grew out of our determination to address the problem of hazardous waste contamination in our state in a comprehensive manner. The legislation was designed to provide our state agencies with adequate legal and financial tools to get about the task of cleaning up all of the sites threatening our environment. It was also designed to assure potential victims of hazardous waste exposure that the state was as much concerned with their needs as it was with restoring damaged natural resources. To do this, it was necessary to address not only the question of who is liable for cleanup costs, but also who is liable for third party personal injury and economic loss and under what legal standards.

There were difficulties in taking this comprehensive approach to the liability question. Complex legal questions had to be considered. Opposition was strong from those who might fall in the category of persons potentially responsible to pay damages to injured victims if such a statute were passed. But

the arguments in favor of a statutory cause of action were powerful. First of all, there were the potential victims of contamination, whose numbers seemed to be continually rising in the early 1980s as more sites were discovered. What were their rights to recover for injuries they might suffer from exposure to these sites? Secondly, there were the people who were being asked to accept new hazardous waste facilities in their communities. These were not going to be old-fashioned landfills, but state-of-the-art treatment and disposal facilities needed to avoid the problems caused by inadequate management in the past. Nevertheless, those who might be asked to open their communities to such facilities wanted to know who would answer for injuries from these facilities if they occurred despite the operating and design precautions that would be built into them.

The answer that government had to give to these questions from the public was: "We can't be sure what the standards are going to be." In Minnesota, as in most states, there was no

case-law that spelled out the legal standards that applied to injuries caused by exposure to hazardous waste. Strict liability had been applied by the courts to injuries caused by defective consumer products and to injuries caused by certain especially dangerous commercial and industrial activities. But the rules of liability for injuries caused by exposure to dangerous chemicals, especially when long periods of exposure and latent disease are involved, simply were not very clear, certain or predictable.

We in Minnesota, studied the history and the trends in the Common Law as it bears on the hazardous waste injury problem. What we found was a clear trend toward strict liability. We also found that all parties who shared responsibility for making the decisions that led to the release of the waste into the environment would likely be required to answer for some portion of the injuries that occurred as a result of those decisions. Therefore, the legislature decided to create a statutory strict liability cause of action for third party injuries as part of its

comprehensive effort to deal with the effects of site contamination in our State. By spelling out the rules of liability in statute, all parties would know where they stand. Potential victims and those who felt threatened by new hazardous waste facilities would know their rights. Those in the business of producing, transporting, and disposing of hazardous waste would know their responsibilities, could assess their risks, and could make the necessary changes in their operations to minimize those risks.

I should mention that, in deciding to address the issue of liability for injury to persons and property, Minnesota's proposal enjoyed the strong support of the study of liability commissioned under Section 301(e) of the Federal Superfund Act. My predecessor as Attorney General of Minnesota, Warren Spannaus, was a member of the 301(e) Study Group, and our office actively participated in the Group's research and recommendations. That Study Group recommended strict, joint and several liability as

the appropriate legal standard for recovery for injuries caused by releases of hazardous substances. It also indicated in very strong terms that the difficulty of proving the causal connection between exposure to a hazardous substance and the injury suffered by a claimant is the greatest single barrier to recovery that injured parties face under current legal principles. These recommendations played an important role in the formulation of the Minnesota law.

Principal Provisions of Minnesota's Law

Let me highlight for you now the principal provisions of the Minnesota statutory cause of action for injuries caused by hazardous waste, as it was enacted last year as part of the Minnesota Environmental Response and Liability Act.

First of all, the Act applies the standard of strict liability to injuries to persons and property caused by the release of a hazardous substance into the environment. In doing this, the Minnesota law codifies in the area of hazardous

substance releases the legal standard that has applied for many years to damage caused by inherently dangerous activities that were not kept properly under control by those responsible for them. In Minnesota, this principle of strict liability was adopted by our Supreme Court as early as 1872. The new circumstances posed by the introduction of dangerous chemicals into the environment and the potential for disastrous effects on precious water supplies -- and the human life that this water sustains -- warrants application of a similar standard to releases of hazardous waste.

Secondly, under the Act liability is joint and several with respect to those who in some way share responsibility for the release. In many cases of hazardous waste site contamination, it would be extremely difficult, if not impossible, to prove which of a large number of companies that used or operated the site are responsible for an injury. Requiring all of the parties to share in the payment of damages is more fair than to leave the injured

parties uncompensated. However, the Act also recognizes that it is not fair to hold every party that had anything at all to do with disposing of a hazardous substance legally accountable to pay damages for a release. The relationship of certain parties to the release of a substance and to the resulting injuries may be too tenuous to require that party to be liable for the injuries. The Minnesota cause of action recognizes these questions of fairness. The Act limits the circumstances under which waste transporters and site owners can be held liable. It also limits the liability of any party who can show that a definite share of the damages can be apportioned to his involvement in the release, by requiring him to pay not more than twice that apportioned amount of damages. The generator who put only a single barrel of waste in a landfill is treated fairly under this provision of the Minnesota law.

The third major provision of the Minnesota Act is the section related to proving the causal connection between exposure

to a hazardous substance and a particular injury or disease. As I noted earlier, this is the problem singled out by the Section 301(e) Study Group as the greatest barrier to recovery by injured victims. The Minnesota causation provision does not change the burden of proof of causation, nor does it create any evidentiary presumptions that favor the injured party. Instead, the law addresses two other questions: first, What kind of evidence is necessary to get the case before the jury? and second, What degree of certainty of expert medical testimony is required to get that evidence to the jury? I believe that what the Minnesota law provides on these two questions is largely, though not entirely, a restatement of the way that the common law would treat the causation problem. This accomplishes the goal of making these common law principles visible and certain for plaintiffs, defendants, lawyers, and judges. But I do not think that the provision substantially shifts the balance in favor of injured victims. It is still going to be very difficult for an

injured party to marshall the necessary scientific and medical evidence that will allow him to get his case to the jury.

There are other important provisions in the Minnesota Act which we could discuss if there were more time. For example, the Act provides a statute of limitations which recognizes that injuries often have long latency periods and that victims often may not know that their injuries are related to the release of a hazardous substance. The Act also addressed the issue of applying strict liability to injuries that are discovered today but were caused by disposal practices that took place many years ago. The Act has a cut-off date beyond which the statutory cause of action does not apply to past disposal actions. Common law will continue to apply to these cases.

I have only been able to give you a brief outline of the Minnesota statutory cause of action for third party injuries caused by hazardous substance releases, but I think that it explains the reasons why this law was enacted and why we believe

it is a necessary and fair approach. I might add that the Minnesota law did not "open the floodgates" of litigation. We are only aware of three cases which have been filed so far. What is important is that the legal standards are now in place.

The Need for a Comprehensive Approach to the Effects of Improper Hazardous Waste Management

Let me repeat that third party liability is only one part of Minnesota's comprehensive approach to the effects of improper disposal practices. The first concern of the Minnesota Act is the cleanup of the contaminated sites, and this is the focus of State action in Minnesota. Already, with the help of the 1983 Minnesota law, several cleanups have been completed and nearly twenty sites are under investigation or being cleaned up. Over $17 million dollars, almost all of it from private parties responsible for the releases, has been committed to cleaning up these sites. These efforts will minimize the exposure of persons residing near these sites to hazardous substances which might otherwise have resulted in injury.

In order to assure that site cleanup will continue to proceed expeditiously, it is crucial that the Congress renew the mandate and augment the funding of the Federal Superfund Act. The efforts of this Committee to reauthorize the Superfund are greatly appreciated and strongly supported in our state.

While continued vigorous pursuit of site cleanup is probably the best way to make sure that there are not going to be a great number of injured victims in the future, our cleanup efforts have shown that there are many potential victims of hazardous waste exposure in Minnesota. Five cities in Minnesota, with a total population in excess of 100,000 have municipal wells contaminated at levels requiring them to be closed or the water to be treated with carbon filtration. In addition, nearly 170 private wells have been so badly contaminated that the State Health Department has advised the residents not to drink water from these wells. Site cleanup will prevent further exposure from the sources of contamination, but it provides no remedy to

those who have already been exposed sufficiently to threaten their health. These people deserve a fair opportunity to be made whole for the injuries which they have sustained. This is why a statutory cause of action for third party injuries is a necessary part of a comprehensive approach to this problem.

Comments on a Federal Cause of Action

The question remains whether a federal cause of action is a necessary and desirable way to address the third party liability problem. Let me outline a few of the advantages of federal action on this subject.

The proper management and disposal of hazardous waste and the cleanup of contaminated sites is a problem of national scope. It deserves a national solution. Transportation, treatment, and disposal of hazardous waste, if not carried out properly, threatens the health and environment of citizens of every state. All citizens deserve the protection which can be provided by uniform national legal standards for this conduct. With greater

certainty about the legal risks inherent in the production, use, and disposal of hazardous substances, industry can make its own decisions about how to minimize those risks. Knowing the potential cost of continuing current practices will be a strong incentive to examine and, where necessary, correct those practices. Finally, a national standard helps to avoid "bidding wars" for the location of new and expanding industry among states with different legal standards. Conflicts of this sort detract from the protection of the public health and the environment which citizens in every state have a right to expect.

As you consider a federal cause of action for third party liability, one other issue should be kept in mind. The setting of legal standards necessary to adjust the conflicting rights of private parties is an area of the law which has been largely left to the states. In addition, the environment of each state has its unique heritage. States must retain the authority and responsibility to protect their environmental heritage and the

health of their citizens. Therefore, if the Congress chooses to enact a federal cause of action in this area, it should not displace the authority and responsibility of the states. It should not preempt state law on the same subject.

I want to thank the Committee for this opportunity to share our views on this subject. If I or my office can be of any further assistance, please let me know.

STATEMENT OF GEORGE CLEMON FREEMAN, JR.

HUNTON & WILLIAMS
RICHMOND, VIRGINIA
WASHINGTON, D.C.

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

CONCERNING
THE STAFF DRAFTS OF POSSIBLE AMENDMENTS
TO THE SUPERFUND ACT (CERCLA)

July 31, 1984

INTRODUCTION

Mr. Chairman, Committee Members, Ladies and Gentlemen -- my name is George Freeman. I am a partner in the law firm of Hunton & Williams, with my offices both in Richmond, Virginia, and Washington, D.C. I am also a member of the Virginia, D.C. and Alabama bars.1/

1/ I am also a member of the Council of the American Law Institute (ALI) and the American Bar Association (ABA). In the past, I have served as chairman of the ABA Standing Committee on the Facilities of the Law Library of Congress, on the Council of the ABA Section of Corporation, Banking and Business Law, and as Chairman of that Section's Ad Hoc Committee on the

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It might be helpful to indicate briefly where I am coming from on the issues before you today in terms of past and present practice and bar related activities. My firm represents clients that have an interest in the present administration of the Superfund Act and who would be adversely affected by the Staff proposals. However, in my testimony here today, I am not speaking for that firm or any of its clients or the ALI or ABA. I express my own views as a member of the practicing bar.

My interest in the Superfund Act stems initially from my informal work, pro bono in 1980, with several members of the Committee and their staffs in analyzing various proposals before you in S.1480 and my subsequent service as one of 12 members of the Superfund § 301(e) Study Group. I was one of the three lawyers on the Group appointed by the then President of the American Bar Association.2/

In my testimony today, I address:

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Federal Criminal Code. I am presently a member of that Section's Ad Hoc Committee on Tort Law Reform and its representative on the ABA's Coordinating Group on Regulatory Reform.

2/ Because my statement of separate views in that Report bear directly on many of the issues before you today, that statement is included in this testimony as Attachment A. *

*The attachment referred to has been retained in committee files.

1. The specific provisions in the Staff draft creating a federal cause of action for persons injured by exposure to hazardous substances; and

2. The practical and constitutional problems created by retroactive imposition of CERCLA liability, whether for the benefit of the Government or private parties.[3/]

1. A Starting Point -- Where You Were in 1980

In 1980, you dealt initially with the issues before you today in S.1480 in your regular session and then with the Senate compromise in the lame duck session. That not too distant history is a good starting point. In 1980, this Committee reported out a bill, S.1480, that included a federal cause of action for individuals. The cause of action was, however, more limited than the Staff Draft proposal before you

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3/ My testimony today focuses upon the "federal cause of action" (Staff Specification 28) and related provisions (e.g., Staff Specifications 2, 9, 10, 13, 14, 21, 22, 25, 29) apparently intended to promote private tort litigation. As a result, I have not had the opportunity to analyze in detail other provisions in the Staff Draft which may be equally troublesome (e.g., Staff Specification 18). My brief review of these other provisions, however, discloses that the Staff Draft has picked up several fairly obscure technical provisions which are also included in H.R. 5640, 98th Cong., 2d Sess. (1984), as reported last month by the House Committee on Energy and Commerce. These troublesome provisions override the Administrative Procedure Act (APA), 5 U.S.C. § 551 et seq., and thus would require the Senate Judiciary Committee to review any bill containing them, which this Committee might report. I have enclosed my analysis of the equivalent provisions in H.R. 5640 as Attachment B to this testimony. They are ill-advised and potentially unconstitutional.*

*The attachment referred to has been retained in committee files.

today. S.1480 would have provided a federal right only for reimbursement of medical expenses and some economic losses. It did not provide for awards of pain and suffering or punitive damages, which are included in the Staff Draft.

Since the federal cause of action in S.1480 would have been in addition to, rather than preemptive of, existing State remedies, the omission of subjective damages would still have permitted plaintiffs to seek those subjective damages where applicable State law permitted. They could do so through the federal courts' exercise of pendent jurisdiction in suits under the federal cause of action or in separate State court actions.

In their separate statements in this Committee's Report on S.1480, four members of this Committee voiced serious objections to those private right of action provisions.1/ S.1480, as you know, was not enacted. In its place, you passed a compromise bill, which was the product of intensive negotiations among the members of this Committee and other Senators. Only you know what actually transpired in these negotiations. But it is clear that the compromise bill did not include the private right of action provisions. There were other important changes from S.1480 as well, such as the

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1/ See Statement of Senators Domenici, Bentsen, and Bauer and Statement of Senator Simpson in S.Rep.No. 960, 96th Cong., 2d Sess. 116-122 (1980).

diminished size of the fund and the features of the cleanup reimbursement liability system which survived the negotiations.

Recognizing the imperfect and incomplete nature of the compromise, you provided for a series of studies to assist you in reconsidering many key issues when your compromise Superfund Act came up for reauthorization in 1985. These studies included EPA's Section 301(a) studies on the size of the Fund, the scope of the hazardous waste cleanup problem, and Fund financing methods. They included Treasury's Section 301(b) studies on alternatives to the post-closure liability fund and insurance for liabilities created under the Act. They also included the Section 301(e) Study of the adequacy of existing remedies under other law for injuries and damages to private persons caused by releases of hazardous substances.

Some of the reports from these studies, such as the Treasury insurance report and the Section 301(e) Report, are in. Others have been promised to you by EPA Administrator Ruckelshaus on time this December.

You would do well to defer final action on these matters until you have these reports, since what is proposed in the Staff Draft could have far reaching negative effects on EPA's implementation of Superfund cleanups. This is especially apparent in the proposals which would divert funds from the Superfund which would otherwise be spent on cleanup to a

variety of other uses, such as the financing of private personal injury litigation and suits by state attorneys general against federal agencies.5/

Going back to the 1980 compromise, given the fact that you were in the "waning days" of a "lame duck" session in which a small but determined group of Senators could have blocked any legislation, I believe it is fair to conclude that the four Senators who voiced major concerns in their separate statements on S.1480, and who were among the key participants in the Senate compromise, believed that the compromise bill did not present the major problems of fairness, insurability and unconstitutionality that they discussed in their earlier separate statements on S.1480. Moreover, I believe that they may still adhere to the view that Superfund liability, whether to the Government or to third parties, should not be imposed to "punish the innocent for the sins of the guilty."6/

5/ (Staff Specifications 19 and 21). Insofar as the academic community is concerned, I urge you to ask today's leading commentators on tort law, such as Professors Calabresi, Grad, Keeton, O'Connell, and Priest and Judge Posner, among others, to give you their views on the fairness, efficiency and constitutionaity of the overall scheme that would result from enactment of the Staff Draft. I understand that many of these commentators have been focusing on this general topic area in preparation for a conference to be held at Yale Law School this fall, to which members of your Staff probably have been invited.

6/ S.Rep.No. 848, 96th Cong., 2d Sess. 121 (1980).

Yet that is exactly what the present Staff Draft would do if new, substantive federal liability were imposed on conduct that prior to the date of enactment was neither illegal nor actionable under applicable State law. Moreover, such an application of new, substantive, strict, joint and several liability to conduct occurring prior to the date of the enactment may be unconstitutional.

Therefore, I urge you to stop, look and listen and to defer action on these critical issues until next session when the reports that you asked for in 1980 are available. Also, because of the complexity of these issues and their potential impacts on our economy, I urge that you follow traditional Senate procedures and afford all segments of the interested public the opportunity to study, analyze and then to testify on a specific, introduced bill.

2. The Suggested Federal Cause of Action

At the outset, I want to make absolutely clear that the Superfund Study Group considered the creation of a federal cause of action in CERCLA for property damages and personal injury and, after considerable discussion, unanimously rejected recommending such a cause of action to the Congress. There was considerable variation in background and experience of the twelve lawyers on that Commission, and we had different reasons

for reaching that conclusion. But one reason that all of us shared was our belief that the tort system is an unsatisfactory means for dealing with small claims in general, and with long latency claims in particular. We did not believe that the generic problem of smaller claims could be answered by patches, or add-ons, to the present tort system. For that reason, we recommended instead a limited administrative system to supplement existing State remedies.

In addition, for my own part, I felt that if we were to recommend a federal cause of action, then we also had to address several closely associated issues. Those issues are preemption, subjective damages, attorney fees and retroactivity. I suggest to the Committee today that if you proceed to recommend creation of a federal cause of action, you should also address those inseparable issues.

A. Preemption. If you create a federal cause of action, it should be the exclusive remedy and should preempt any contrary State law. This is particularly true if, for reasons I urge later, you make the federal cause of action prospective only from the date of its enactment. As such, it would be more appropriate as part of the ongoing comprehensive federal scheme for the regulation of hazardous wastes under the Resource Conservation and Recovery Act (RCRA). Thus, after the enactment of legislation creating a new, federal substantive

right, all who chose to engage in the generation, storage, transportation or disposal of hazardous or toxic substances would be on notice that they act at the peril of strict, joint and several liability.7/ They could decide whether or not to say in business or to get out of business and do something else.

Those who elect to stay in business and operate under this stringent new rule would know that they must set aside sufficient reserves or obtain equivalent insurance against the contingent strict liability. If competitive and business cycle conditions permit, these new costs could be passed on to the public through the prices of goods and services produced. In that way we will have, as the economists say, "internalized the external social costs" of the property damage and personal injury that are inevitable in our industrial society. In the context of such a new federal scheme, uniformity would help assure this "pass through" so long as contrary State law is preempted.

7/ For reasons I discuss below, I believe it would be preferable to adopt the "channelling concept" discussed in the Superfund Section 301(e) Report, in place of "joint and several" since that would substantially lower insurance costs, and thus costs imposed on American consumers. See Richard A. Schmalz, Superfunds and Tort Law Reforms: Are They Insurable?, 38 Bus.Law. 175 (1982) (Attachment C to this Statement).*

*The attachment referred to has been retained in committee files.

We also must recognize that if this "pass through" of the extra costs imposed by CERCLA or RCRA liability cannot take place, then added costs must be absorbed by the producer. This, in turn, would impose a new set of social costs on his stockholders, employees and the communities in which his plant are located. As pointed out in my separate statement in the Superfund Section 301(e) Report and the authorities cited therein, when the attempt to "internalize" by imposition of strict liability fails in this way, the new "external" social costs created may vastly exceed the external costs sought to be shifted through strict liability. Thus in an attempt to right one wrong, we may create new wrongs that are more unfair and present much greater problems for society as a whole.[8/] These

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8/ Although a copy of your Staff's proposed "Administrative Victim Assistance" proposal was included in the July 6, 1984, issue of Inside EPA Weekly Reports, I have not had the opportunity to review the plan in detail. This also applies, of course, to the new proposal which appears in the new Staff Draft which surfaced this week. These plans were not included in the June 19, 1984, "Superfund: Specifications and Language for Amendments," which I have examined. Let me suggest, however, that the Committee circulate any such administrative plan it drafts to all twelve members of the Superfund Study Group. The Group spent over a year in a detailed analysis of the legal issues involved in creation of an administrative compensation system for those injured by hazardous waste releases. The Staff proposals appear to depart from the Study Group's recommendations to Congress in many respects, and it is only appropriate that this Committee hear directly from the members of the independent panel it created who spent over a year in working out its proposal. I urge you to reconsider our § 301(e) recommendation for a limited administrative system,

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wrongs could wreck or retard our present economic recovery.

B. Compensation. The Staff Draft would not only provide for compensation of economically, objectively determined damages (medical expenses, rehabilitation costs, burial insurance, loss of income or profits, impairment of earning capacity, and economic loss or damages to property), but also for subjectively determined damages (pain and suffering and punitive damages). The coupling of awards for subjective damages with retroactive application of the proposed legislation would literally threaten many companies and their insurers with a presently unascertainable potential for liability ranging from millions to billions.

Even if the bill is clarified to eliminate any retroactive application of the "strict" (which is "absolute" as EPA presently interprets it), joint and several liability, the inclusion of subjectively determined damages could drive insurance rates through the roof or make insurance altogether unavailable. Either result would make it impossible for all

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(a) with the binding election feature mentioned below, (b) no statutory presumptions, and (c) funded by a value added tax on all goods from specified industries that are sold in this country, wherever produced. This would have far less adverse consequences than the imposition of special taxes (or strict liability for unlimited damages) on American producers facing significant foreign competition.

but our major corporate giants to stay in the vast array of businesses that produce vastes that are characterized as "hazardous" under CERCLA. And even these giants would be hard pressed by foreign competitors who would not have these massive increased costs imposed on them. And even where the absence of meaningful foreign competition would permit these increased costs to be passed on, the resulting escalation in the prices of goods and services could have substantial adverse consequences for consumers and our economy.

Recognizing these potential effects, Congress in 1980, in Section 301(e) of the Superfund Act, specifically asked our Study Group to consider the effects of any proposed changes in the law on the availability of insurance. Having ascertained the views of the insurance industry as to the availability or unavailability of insurance and the increased costs of insurance under various proposals we considered, we felt it necessary (1) to provide dollar limitations on the compensation for loss of wages or earnings provided in our Tier I administrative compensation scheme, and (2) to make subrogation for reimbursement of the compensation fund to be created prospective only. Moreover, some of us, and I was among them, felt that a binding election between the federal administrative remedy and the State tort remedy was essential to a workable system.9/

9/ If the Committee desires to encourage use of the administrative remedy, it might provide for a scheduled

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For these reasons, should you proceed to recommend to your Senate colleagues a federal cause of action, I urge you to limit compensation to economic, objectively determined losses. At the same time you come to grips with the elements of compensatory damages under any proposed federal cause of action, I would also urge you to also deal with the punitive damages issue. That issue is posed not only by the Staff Draft proposal, but it is also a major element of uncertainty, unfairness and abuse in the existing mixed CERCLA-State tort remedies system.

Punitive damage is one issue which sharply divided the Superfund Study Group and which was not addressed in the majority report. But I believe that had we taken a vote, the majority of that Group would have favored federal preclusion of punitive damage awards under State law where there is a comprehensive scheme of federal regulation or, in the alternative, compulsory consolidation of all suits for punitive damages arising out of the same action or series of actions,

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recovery (subject to an aggregate upper limit) of an award for the social, psychological and related injuries geared to tangible events objectively identified as physical and neurological consequences of the physical injuries, as recommended in the Joint Statements of Messrs. Anderson, Breitel, Freeman and O'Connell in the Superfund § 301(e) Report, Part 1, pp. 286-88.

with only a single punitive award for an improper course of conduct.

In my separate comments in the Superfund § 301(e) Report, I said that punitive or exemplary damages have no socially desirable role in a comprehensive scheme of federal regulation such as RCRA and Superfund, which provides for civil and criminal sanctions. Where Congress has exercised its Commerce Power to regulate industrial activity or practices and elects to leave some private remedies to State law, it should nevertheless preclude any State punitive or exemplary damage award. This is because such awards essentially duplicate the criminal and civil sanctions provided in the federal statute. The Staff Draft's recommendations for toughened civil and criminal penalties illustrate my point.10/

Duplication of sanctions may also constitute an unreasonable burden on interstate commerce since it may furnish a major deterrent to engaging in worthwhile economic activity in this country. In addition, punitive damages can result in overcompensation of a few claimants and their lawyers to the detriment of many worthy claimants if the "single award" approach discussed above is not followed.11/

10/ Strangely, however, the Staff Draft amends the Clean Water Act's penalties in the context of Superfund reauthorization, even though the Senate has a Clean Water Act reauthorization bill before it now.

11/ Indeed, unless punitive damages are prohibited, we may see the same abuses and inequities in the present asbestosis

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C. Contingent Fees. If Congress were to provide for strict, joint and several liability in a federal cause of action, it would have the effect of so enhancing the chances of plaintiffs' prevailing as to make the system the substantial equivalent of a "no-fault" administrative compensation system, such as workers' compensation, no-fault automobile insurance, veterans' claims and social security. One must then ask whether or not contingent fees are any longer justified or serve any worthwhile public purpose in such a system. Moreover, other proposals in the Staff Draft would significantly lessen the up-front costs of trial preparation, removing that last prop from a contingent fee justification. In such a regime all contingent fees would do is to enrich the lawyer disproportionately to the services he actually rendered, at the price of reducing the claimant's recovery.

There is precedent in other federal statutes for providing that legal fees be approved based on reasonable rates for time actually involved in representation. If you were to report any federal cause of action that tilts the present balance between defendants and plaintiffs in the present State

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litigation/bankruptcy debacle repeated in industry after industry through the growing volume of hazardous waste litigation, whether or not Congress escalates that litigation volume through a federal cause of action add-on to CERCLA.

tort systems in favor of plaintiffs, I believe you should include such a limitation in CERCLA.

3. Retroactivity

I now turn to the troublesome policy and constitutional problems presented by any retroactive application of strict (absolute) liability, as it may or may not be aggravated by making such liability joint and several. The subject of retroctivity is one of the principal matters we discussed at great length in our Superfund Study Group deliberations. That Report recommends that any recoupment through subrogation of funds paid out in the federal administrative scheme to compensate persons injured by hazardous waste be prospective only. In my separate statement in the Superfund Report, I emphasized the importance of that decision and explained the reasons for it:

> Our discussion of retroactivity centered on the currently active hazardous waste disposal facilities. We decided to recommend imposition of liability for injuries or damages which were unforeseeable only on a prospective basis. Thus, the operator of an existing facility would have the option of staying in business under the new rule or closing it down. Concerns in the insurance industry, where "claims made" and "occurrences" policies still apply for differing sites, might also be lessened. As to past acts, the negligent operator would continue to be liable to the victim (or to those who compensated him) under [applicable state] common law principles, but the risk of unforeseeable injuries would rest on the Fund and not the operator.

> In deciding against retroactive application of a "strict liability" subrogation claim, the Study Group looked to the same equitable principles which underlie the constitutional prohibition against ex post facto laws, due process and the general rule of construction that a statute should only be given prospective application. We also recognized that sporadic imposition of strict liability on a retroactive basis poses potentially serious impediments to the long term availability of adequate insurance coverage at reasonable rates.

The Superfund Act does not expressly provide for the imposition of liability retroactively. Under accepted canons of statutory construction, retroactive application of a statute is not favored. Indeed, one of the more recent Supreme Court decisions in a long line of cases enunciating this principle, Greene v. United States, 376 U.S. 149, 160 (1964), says:

> [T]he first rule of construction is that legislation must be considered as addressed to the future, not to the past . . . [and] a retrospective operation will not be given to a statute which interferes with antecedent rights . . . unless such be "the unequivocal and inflexible import of the terms, and the manifest intention of the legislature." (quoting Union Pacific R. Co. v. Laramie Stock Yards, Co., 231 U.S. 190, 199 (1913).

Despite the presumption against retroactivity and the ambiguity presently existing under the Superfund Act, several district courts, at the urging of the Justice Department, have held that Congress intended the Act to impose liability retroactively on generators and transporters who generated or transported wastes to sites prior to the date of enactment of

the Superfund legislation but whose conduct was neither illegal nor actionable under applicable State law. This is precisely the kind of "punishment of the innocent for the sins of the guilty," that Senators Domenici, Garrison and Baker condemned in their separate statement on S.1480 in 1980 and that I believe those of you involved directly in the Senate committee sought to avoid.

The most methodically reasoned of these recent, "first round" CERCLA opinions is State ex rel. Brown v. Georgeoff, 502 F.Supp. 1300 (N.D.Ohio 1981). There, the court concluded that the State's claim against the defendant in the case, a transporter of waste, would necessitate a retroactive application of the statute and that the Gregg presumption against retroactivity was applicable. It also held that the statutory language was not sufficiently clear to overcome the Gregg presumption but then concluded that the "legislative history" evidenced an adequate expression of congressional intent to apply liability retroactively so that the Gregg presumption was overcome. I personally believe that the court's interpretation of the legislative history of the Superfund Act in this regard was erroneous.12/

12/ I also believe that the Justice Department's repeated citation of the joint statements of Senators Domenici, Garrison and Baker as to S.1480 to support its interpretation misperceives the main thrust of those remarks and is contrary to the principles expounded there, as well those reflected in Senator Simpson's separate statement in the same Report.

Of course, it will be several years before these cases ultimately make their way to the United States Supreme Court which must ultimately resolve the matter. The changes proposed in the Staff Draft only confuse this issue further and push its resolution into the future. This would further compound questions now pending in several courts as to what, if anything, Congress intended regarding a host of other questions directly related to CERCLA liability. These issues are:

1. What is the standard of liability? In the context of conduct prior to enactment, is liability to be determined under applicable State law or is strict liability imposed? If strict liability, is it to be traditional notions of strict liability that requires some balancing or is it the equivalent of "absolute liability"? If the former, is the Government required to show either that (a) a defendant's conduct was culpable (negligent or some higher degree of fault), (b) the activity was socially undesirable or (c) the activity was "abnormally dangerous"? See, e.g., Restatement (Second) of Torts § 520. If, on the other hand, "absolute liability" is to be the test, is a defendant to be held liable without more for an activity which was not at the time he acted either illegal or blameworthy?11/

2. What is the standard of causation? And who has the burden of proof? Is it enough, as the Government contends, to show that defendant's waste of a particular kind was disposed of at the

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11/ See Superfund 301(e) Report, Part 1, p. 298 (separate statement of Judge Breitel).

site in question and that the same kind of waste is still at the site, even though there is no evidence that the release requiring cleanup contains the kind of waste produced by the defendant? In a word, does the statute contemplate a drastic relaxation of traditional standards of proof of causation-in-fact?

3. Is liability joint and several? And if so, what criteria govern its application? The Senate compromise clearly ducked this issue in the face of a realization, evidenced by the proposed Gore amendment to the House bill, that there are serious questions of fairness involved in a literal and unqualified application of traditional theories of joint and several liability to hazardous waste disposal. This is because the traditional limit on application of joint and several liability -- proof of the divisibility of the harm -- is usually not workable in complex chemical situations where different wastes from difference sources are present. Where proof of divisibility is not practicable, it is obviously unfair to impose joint and several liability on a minor contributor to the total volume of waste at the site, and even more so if his wastes are substantially less harmful than other wastes present or only minimally involved in the actual or threatened release needing cleanup. In addition, if the courts are to be bound by common law principles in applying the joint and several concept, which common law, state or federal, is to be determinative?

4. Is there a right of contribution? The contemporary application of joint and several liability is normally in the context of a right of contribution and related rules as to when the right may be asserted (by third party complaint or in a separate action or both) and as to the basis of the right (pro rata or comparative contribution to the harm,

taking into account both fault and causation). Once again, CERCLA is totally silent on the issue of contribution, and the Supreme Court has shown great reluctance to infer such a right under other statutes.

5. What is the effect of a settlement by one of several defendants? CERCLA litigation often involves numerous defendants, large monetary claims, complex issues of fact and law, and heavy litigation expenses. Litigation of that type is often settled. Yet the obscurity of the statute on both joint and several liability and on rights of contribution is compounded by the total failure to provide guidance on:

   -- What is the effect of a settlement on a settling party's rights against other potentially liable defendants?

   -- What is the effect of a settlement on rights of other potentially liable parties against a settling defendant?

   -- What is the effect of a settlement in reducing the Government's claim against other defendants -- by the amount of the settlement or by the amount of the settling party's comparative percentage of ultimate liability?

All the issues in these five major categories are dealt with in state law regimes by either statute or judicial decision. But they are not addressed in CERCLA.

Against this background, the Government's reliance on the oblique reference in CERCLA to § 311 of the Clear Water Act fails to supply "guiding principles" on how to answer these questions in the context of the retroactive application of

CERCLA. And this statutory deficiency is not remedied by CERCLA's legislative history.

Even if we knew the answers to all of these complex, interrelated questions, retroactive imposition of liability of any kind raises serious questions of fundamental fairness as well as constitutional questions. In his famous Lowell lecture on the theory of torts, Oliver Wendell Holmes concluded:

> The tendency of a given act to cause harm under given circumstances must be determined by experience. And experience either at first hand or through the voice of the jury is continually working out concrete rules, which in form are still more external and still more remote from a reference to the moral condition of the defendant, than even the test of the prudent man which makes the first stage of the division between law and morals. It does this in the domain of wrongs described as intentional, as systematically as in those styled unintentional or negligent.
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> But while the law is thus continually adding to its specific rules, it does not adopt the course and impolitic principle that a man acts always at his peril. On the contrary, its concrete rules, as well as the general questions addressed to the jury, show that the defendant must have had at least a fair chance of avoiding the infliction of harm before he becomes answerable for such a consequence of his conduct. And it is certainly arguable that even a fair chance to avoid bringing harm to pass is not sufficient to throw upon a person the peril of his conduct, unless, judged by average standards, he is also to blame for what he does.

The imposition of strict, joint and several liability retroactively on persons for acts which prior to the date of

enactment of the legislation were perfectly legal and free from liability flies in the face of this fundamental principle of the common law.

Retroactive imposition of new, strict, joint and several liability without proof of causation-in-fact is also unconstitutional under the Due Process Clause. Moreover, where the damages imposed for past innocent conduct are wholly out of proportion to the nature of the conduct, the damages are, in fact, punitive, criminal sanctions for constitutional purposes and thus also transgress the constitutional safeguards against ex post facto laws.

It is possible under the current Superfund Act to avoid the constitutional problems by construing the Act's ambiguous language and legislative history so as not to impose "a new liability on completed past transactions."[14/] CERCLA can be interpreted to impose CERCLA liability on pre-enactment conduct on the basis of applicable State law principles. That alternative would, of course, not be constitutionally retroactive since it would not create any new obligation or duty. Such a construction also separates the "innocent" (those who had taken no act that at the time taken was illegal or actionable) from the "guilty" (those who had acted illegally,

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14/ See United States v. Stringfellow, 20 Env't Rep. Cas. 1912, 1915 (C.D.Cal. 1984).

negligently or otherwise so as to be liable under applicable State law). It does not punish the innocent, yet it still affords EPA a procedural remedy in federal court under CERCLA against the guilty. Under this view, CERCLA's application to past acts is equivalent to the common law right of restitution where A has a legal duty (here, cleanup) and B (here EPA) performs it for him. See Restatement of Restitution § 115.

Thus, if you take any action this term on Superfund reauthorization, I urge you not to compound the inequities posed by potential retroactive application of virtually absolute liability to the Government by (1) adding on top of it virtually absolute liability by private persons. If you do anything here, make clear that in 1980 you did not intend to permit the Government "to punish the innocent for the sins of the guilty" in the cleanup context and that you do not now intend to let private plaintiffs lynch them here by making any new third party cause of action retroactive.

4. The "Adjudicalization" of America

Finally, I ask you to stop and think about the implications of our nation's growing resort to litigation to solve more and more of our social problems -- I call this process the "Adjudicalization" of America.

For the last 10 or 15 years, I have had the principal responsibility -- at least as the senior lawyer in my firm -- in representing the electric utility industry in the administration of the Clean Water Act and the Clean Air Act and in most of the hybrid rulemakings of the Atomic Energy Commission, now the Nuclear Regulatory Commission, under the Atomic Energy Act, involving safety systems and the disposal of nuclear wastes. So I have had practical experience in addition to the academic experience of two years of service on the Superfund Section 301(e) Study Group. This Committee also has considerable practical experience with those three Acts. I ask you to compare the nation's experience under those acts, particularly the Clean Water Act, with our experience to date under CERCLA and RCRA. How poorly CERCLA and RCRA actually work in contrast to the Clean Water Act, which works very efficiently! Thinking back over my own experience with the utilities in the implementation of the Clean Water Act, I believe that virtually every utility in the United States is today in compliance with that act. And 99.9 percent of that compliance has been voluntary. It has been a process that has been administrative, not litigative, and that is the key to our success in implementing the Clean Water Act.

You know from other witnesses that the principal driving force for the Superfund Act is litigation. But

litigation is not only its driving force, it is the principal obstacle to the swift and fair enforcement of the Act. The Draft before you would make that situation worse rather than better.

Now, let me try to explain it this way. In the long run, for any law to be practically enforced and observed, we must be able to count on voluntary compliance by the vast majority of persons subject to it. To get that voluntary compliance from our citizens, first we have to have a law that is clear on its face and that people can understand. Second, we have to have a law that the majority of the people think is fair. And third we have to have stringent enforcement against the small minority who disregard the law. Then the law is actually enforced.

But the law before us today, the Superfund Act, is probably the most obscure piece of legal drafting any of us have ever experienced. Since most of you were here in 1980 and some of you participated in the Senate compromise, I need not tell you why the final bill is obscure and conflicting. You know far better than I. But let's take only one example.

Going back to the liability provisions, the original Senate bill had said liability was to be strict liability, and that it was to be joint and several. But those words were left out of the final compromise bill. Because if they had been in

the bill, it probably wouldn't have passed. It could have been blocked. So in the compromise, a reference to the Clean Water Act was put in and everybody went to the floor and said the reference means what I think it means, and not what others think it means. And the same thing happened over on the House floor. That's only one example of where you ducked a key issue.

So we are confronted with a law where on the key elements of liability people cannot know, until the Supreme Court finally answers all the open questions I discussed earlier, what they will have to live by and what they can count on. I understand the problems practical politics present Congress in all legislation. But there should be limits to such expediency. If Congress had done its duty in 1980 to spell out clearly in the statute what it actually intended, our people would now know what the law really is.

The second major problem with the Superfund compromise is that as part of that political compromise, the Fund was cut to a figure far lower than anybody in their right mind thought it ought to be. That has had this effect: EPA as a matter of practical politics has had to give priority to litigation over cleanup.

Now, let me ask you to stand for a moment in the shoes of a lawyer advising a client who had received a letter from

EPA saying in effect, "You may be liable, come clean up or pay up. You may be guilty or innocent but that's immaterial. We are fully prepared to punish the innocent for the sins of the guilty."

Those clients fall into two general categories. If they now own a site where they generated and disposed of their own wastes, there is no doubt as to the legal obligations under Superfund. Indeed, they were probably obligated to abate any nuisance on their own property by the pre-existing law of every State in the Union. So the main thing is to advise them on how to settle with EPA. Get in there and clean it up as fast as possible. And if you can settle it out of court, you are better off because if the Government sues, private plaintiffs will sue you also, and you may be stuck by collateral estoppel. That is category number one. This is essentially the way the Clean Water Act works. It is self-enforcing; a citizen can know if he has the legal responsibility, so he does his duty. This is the heart of voluntary compliance.

But let us take the second much broader category of persons who may or may not be legally responsible under CERCLA. Let us take a former generator of wastes, which he may or may not have known were harmful, who shipped his waste through a reputable transporting firm to a reputable waste disposal site in full compliance with all the laws that were applicable to

him at the time he acted, and in a way that existing State or federal law would not have imposed any liability on him. There you have a different situation. And let's compound it by saying he is only one of 10 or 15 or 70 generators was shipped all kinds of waste to the site.

The way the Act is presently administered, EPA sends him a notice. Then he goes to EPA and is told "We want your signature on the dotted line for unlimited amounts of money to assure that this is all cleaned up." If he says "But what about those other guys?, how do you know it's my wastes that are causing the problem?" Well, you know the answer -- "that is tough, you are jointly and severally liable and we don't have to prove causation; pay us the full amount. You may or may not have a right to get something from the others later, Congress didn't say anything about contribution so who knows? You can worry about that later."

In this type situation, the system goes against every notion of fairness in our traditional legal system. In the first place his legal obligations are unclear -- at least until the Supreme Court answers all or most of the questions we discussed above. That is unfair, the law should spell out clearly what the obligations are. And should the interpretations of the Justice Department ultimately prevail, the resulting imposition of costs on a particular individual

may be totally unrelated to his relative contribution to the problem. That also is grossly unfair.

The client's justified feelings of unfairness are compounded by the high stakes. Given the uncertainties as to what may actually be in a particular site, what must actually be done to clean it up, and "how clean is clean," the potential liability he risks may run into hundreds of millions. Under these circumstances, he has no alternative but to litigate. And he does litigate. The volume of that litigation is growing daily, clogging the federal courts, imposing huge litigation costs on private citizens, insurance companies and the Government. And make no mistake about it. This litigation is delaying, rather than expediting, cleanup. It is the very antithesis of what I believe you intended to happen when you created the Superfund in 1980 to get around the long delays of litigation in State courts and to get on with actual cleanup.

The Staff Draft before you would turn this present litigation mud puddle into the Dismal Swam

In summary, what is desperately needed now is more emphasis on administrative remedies and voluntary compliance and less -- not more -- litigation.15/

15/ Professor Frederick R. Anderson, a distinguished professor of environmental law who also participated in the Superfund § 301(e) Study Group, has written an excellent analysis of the need to find ways other than litigation to finance waste cleanup. "Negotiation and Informal Agency Actions: The Case of Superfund," May 25, 1984. The Administrative Conference of the United States issued a number of recommendations to Congress and EPA based on Professor Anderson's analysis on July 19, 1984. 49 Fed. Reg. 29937, 42-44 (Jul. 25, 1984) (Attachment D to this Statement).*

*The attachment referred to has been retained in committee files.

ANSWERS OF HOWARD FRIEDMAN
TO SENATOR SIMPSON

Question

1. In your view, why did the Superfund Study Group reject any Federal cause of action and the expanded use of class actions?

Answer

(a) Federal Cause of Action

The Superfund Study Group concluded concerning the principal deficiency in the present tort system:

> [T]he existing legal remedies and actions may be adequate in spite of existing barriers to deal with very large claims. The system is inadequate, however, to deal with the possibility of mass torts, or multiple exposures, and with claims by hundreds of victims, each of whom suffered a few thousand dollars in damages. . . . [Superfund Section 301(e) Report, page 178, Committee Print page 264].

A Federal cause of action does not address this inadequacy in the present tort system to handle smaller claims. The Study Group concluded that such claims could only be handled through an administrative compensation system. Thus, the Group recommended a Federally financed, state operated, administrative system to provide "limited compensation to meet the economic and medical needs of persons injured in a manner which is more prompt and less costly than tort litigation." Id. at 181, Committee Print at 268. Providing for another tort remedy

based on federal law is not a "second best" solution to this problem, as Senator Mitchell argued during the hearing; it is instead a "no solution."

Once the Study Group had decided to provide for its so-called "Two Tier" approach, a federal administrative scheme and state judicial remedies, much of its deliberations centered around what should be the relationship between these Two Tiers, for example whether a plaintiff should be put to a binding election between the quicker, easier recovery in the federal "Tier One" and the delayed more uncertain but potentially greater recovery in the state "Tier Two." In my view, most of the Study Group members recognized, as Professor O'Connell stated in the Report, "that . . . a no-fault remedy for less payment cannot simply be added on to common law liability with little or no barrier between pursuit of both fault and no-fault remedies." Id., at Committee Print, p. 358.

In my view, the Study Group's collective opposition to allowing plaintiffs to pursue without limitation both Tier One and Tier Two remedies indicates that it also probably would have opposed any "add-on" Federal Cause of Action for the same reasons. The efficiencies in the judicial process which might be established if one uniform set of federal liability rules applied across the United States would be lost were a Federal Cause of Action to simply create another layer of complexity on top of the 50 existing State tort liability rules. Some

members of the Study Group would advocate requiring plaintiffs to choose at the outset between (1) pursuing a Federal Cause of Action for limited damages, where plaintiffs' recovery has been made easier, and (2) their claim under existing state causes of action, with less certain recovery but potentially higher awards.

Further thoughts on this matter are included in my prepared statement at pages 7-16.

(b) Class Actions

The Superfund Section 301(e) Report states:

> The majority of the Group expressed the view that the use of class actions for mass torts is not appropriate [because potential claimants with] knowledge of the action might be bound by its outcome and in part because of highly individual factors affecting personal injuries. A smaller number of members of the Study Group were of the opinion that class action approaches could be usefully adapted to mass tort actions. [Report, at 246, Committee Print at 261].

The members who were plaintiffs' trial lawyers or state attorneys general were the principal supporters of this position. They were strongly opposed to any compulsory class action. I was in the minority on this recommendation because I believe class actions are often appropriate as a means of cutting down on trial expense and court congestion. Class actions also can prevent unfairness in the context of punitive damages claims by many plaintiffs who allege the same course of improper conduct by the same defendant. In my separate statement in the Superfund Section 301(e) Report, I stated:

> [U]nless class actions are to be required, permitting punitive damages to be imposed on activities regulated under RCRA might result in overcompensation of a few claimants and their lawyers to the detriment of many equally worthy claimants.

The Study Group did recommend that there be a liberal rule for joinder of parties. The Study Group expressly recommended the adoption of "liberal joinder rules for defendants as well as plaintiffs." Report, at 244, Committee Print 259. In contexts where there are many potentially liable defendants (such as in multiple generator Superfund site litigation), it is important that defendants whom the plaintiff has selected to sue have the right to compel joinder of other potentially responsible parties in the same suit if and when they become known. Otherwise a plaintiff might be able to unfairly single out for special treatment particular companies based on criteria other than their degree of responsibility for the injury or damages alleged. This problem would be exacerbated by new legislation unless it clearly spells out a right of contribution.

Question

2. Would the proposed Federal Cause of Action eliminate the most important barriers to recovery that are now faced by plaintiffs in toxic tort cases?

Answer

No. As I explained above, the principal deficiencies in the tort system which the Superfund Study Group's recommendations proposed to address (i.e., prompt and efficient delivery of assistance to those with medical expenses and limited economic losses) would not be addressed through creation of a Federal Cause of Action. Moreover, the Group's Tier One proposal was also addressed to the "orphan site" situation where no known solvent defendant exists. Obviously, the Federal Cause of Action does not address this problem either. See Report, Committee Print at 308-09 (my separate statement). Its practical effect would be to leave the major problem unaddressed and to provide a redundant alternative to state tort actions for large claims (which a majority of our Group, particularly the plaintiffs' and defendants' trial lawyers, thought functioned fairly well)..

Furthermore, in the personal injury context, the area upon which the Superfund Study Group focused, the Group recognized that the fundamental barrier to recovery, proof of scientific or medical causation, would remain difficult in any modified tort system. The Group also recognized that eased rules of recovery (eligibility) in an administrative

compensation system would not be appropriate in a tort system, where proof of individual causation should remain an essential element. Report, at 280, Committee Print 265.

The principal modifications to the tort system's liability rules contained in the Staff Draft's proposed Federal Cause of Action are, in some respects, directly contrary to the Study Group's recommendations. Even in its latest (July 30, 1984) version, which the Staff apparently showed in advance only to Leslie Cheek among all the witnesses at the July 31 hearing, the Federal Cause of Action would impose liability without proof of causation or fault on present owners of hazardous waste sites for injuries resulting exposures which occurred at times when they did not own the site. The Study Group, in contrast, recommended:

> Liability for damages for personal injury resulting from exposure to hazardous substances or wastes should not extend to the owner who shows that such substances or wastes were deposited on his land without his knowledge or consent. Report, at 244, Committee Print 259.

Thus, some of the barriers to recovery which the Federal Cause of Action would eliminate would remain if the Study Group's recommendations were followed.

Question

3. From the point of view of the plaintiff's attorney, which is more important: access to the Federal courts or the alterations in theories of liability and the changes in the Federal Rules of Evidence which would apply under the proposed Federal Cause of Action?

Answer

I have not represented plaintiffs in toxic tort cases. However, the three distinguished plaintiffs' attorneys appointed by the then President of ATLA to be members of the Superfund Study Group, were quite skeptical about the effects of providing for special changes in liability rules or the rules of evidence in toxic tort cases. For example, Congressman Elliott Levitas subsequently asked one of them, Fred Baron, at a July 23, 1983, hearing on "victim compensation" in the House Public Works Committee:

> What do you think about the suggestion of simply shifting the burden of proof to the defendant?

Baron responded:

> I would like to speak to that because I think everyone on the group was very amazed at my position when I took it. They assumed I would like to have a presumption in favor of compensability in any case . . . . My practical experience, however, teaches me otherwise. If you develop a presumption that chemical A causes disease B and C, and then your claimant comes in and he has disease D, you have really lost the whole shooting match because the judge or whoever the trier of fact is going to be says, "Hey, the presumption is that this chemical causes B and C, you have D, it can't be related."
>
> It is a double-edged sword. It is a difficult proposition. If we knew all there was

> to know about these toxic chemicals and about their effects, then perhaps that would be a rational approach. But the fact of the matter is we don't and because of that fact I think that the presumption probably hurts the victim more often that it helps.

Weyman Lundquist, another member of the Study Group who had represented defendants extensively, accurately summarized some of the discussion that went on within the Study Group concerning this topic during the same hearing. Concerning the plaintiffs' attorneys' view, he testified:

> To my surprise, [presumptions] were also resisted by people at the plaintiffs' bar in the regular court system because they said their view is that these make it sort of a minimum standard, and the court will say, if you don't have that level of presumption, you won't have a case in court.

Thus, I think it is fair to say that the plaintiffs' attorneys on the Superfund Study Group would be skeptical about the supposed beneficial effects of mandated use of government-sponsored health effects studies or the other types of statistical evidence which the proposed Federal Cause of Action supposes to be "relevant to the issue of causation." However, I would encourage you to ask them to testify directly on such issues as this before you act on this legislation.

As to the importance of allowing access to the Federal Courts, I do not recall any discussion of this largely tactical question during the deliberations of the Superfund Study Group. In the context of the Study Group's proposed administrative compensation system, the Group, including the plaintiff's bar,

opted for use of state workers' compensation boards rather than use of a federal agency. Mr. Baron testified about the Study Group's decision during the 1983 hearing:

> One of our primary concerns and an area we discussed a great deal, was the conceptual and practical differences. Conceptually, you would like one agency to be able to do this. As a practical matter, looking at the black lung administration and at the Federal Employees Compensation Act Administration, and in most Federal systems for giving out compensation benefits, we felt the State workers' compensation system was far preferable as a practical matter, in terms of efficiently doing the job.

And, of course, the Study Group recommended no change in the jurisdiction of federal or State courts over judicial tort actions. I did note, however, the testimony of Mr. Clay at the hearing on Tuesday which emphasized the generally greater experience of federal courts in handling mass tort cases. I would not predict that the plaintiffs' attorneys on Superfund Study Group would have any objection similar to their stated objections to changing the rules of evidence regarding causation to allowing a choice for plaintiffs between a federal and a state forum.

RESPONSE OF JAMES A. PAYNE TO QUESTIONS FROM SENATOR SIMPSON

1. If the Federal government finances plaintiffs' litigation costs, won't that enable plaintiffs with weak claims to in effect "blackmail" defendants into unjustified settlements by threatening to impose massive litigation costs upon them? What deterrant to unjustified claims would exist if a losing plaintiff has no obligation to pay the government back?

This is a good point, and I am inclined to agree that, without further refinement, the proposed amendment to Section 111(c) of CERCLA could lend itself to abuse. Clearly, the objective should be to aid those plaintiffs whose claims are arguably strong ones, but who are prevented from seeking just recovery for their injuries by the prohibitive costs of litigation, while avoiding the financing of frivolous or weak claims. A requirement that losing plaintiffs must pay the government back would certainly achieve the second aspect of that objective, but it would sweep, in my opinion, with too broad a brush. As a practical matter, assuming the risk of underwriting a multi-million dollar groundwater flow or epidemiological study, even if that risk were a small one, would in most cases discourage injured individuals from seeking redress through litigation.

A fairer approach might be to establish certain threshold standards which plaintiffs must meet before funds are released, such as the criteria which petitioners for

health effects studies must meet under Section 8 of the bill ("Toxicological Data"). (Indeed, such health effects studies themselves might provide, in many instances, a major portion of the information which Section 16 is intended to finance.) As in Section 8, such threshold standards could require some minimal showing of exposure, probable source of exposure, and injury. Again, the funds might be released in stages: if the information gathered as a result of the first release of funds was sufficient to establish a reasonable likelihood of certain facts, additional funds would then be released.

Needless to say, in devising such a system, many different factors -- types of injuries, number of plaintiffs involved, projected costs of information gathering -- might be relevant. Nevertheless, I believe an approach which reflects these different considerations -- adopted perhaps through notice and comment rulemaking -- would achieve the objective of supporting the assertion of meritorious claims more effectively than a blanket repayment obligation.

2. Would the proposed Federal Cause of Action eliminate the most important barriers to recovery that are now faced by plaintiffs in toxic tort cases?

The most important barriers to plaintiffs in toxic tort litigation, in my opinion, are: (1) standards of liability requiring proof of an absence of reasonable care or proof that an activity is abnormally dangerous or ultrahazardous;

(2) the legal standards governing proof of causation; and (3) statutes of limitation which are unrelated to the discovery of a causal connection between a release and an injury. Of these, I believe that proving causation -- proving a relationship between a release and an exposure and between an exposure and an injury -- is the most difficult barrier.

The proposed federal cause of action does clarify or define the standard of liability for the release of certain substances as strict, though it leaves the courts free to approve various defenses and to apply or to fashion common law rules of joint and several liability and apportionment. It further adopts a reasonable statute of limitations which begins to run only after the discovery of an injury and a causal connection between that injury and the release. In these provisions, the proposed cause of action does help to eliminate barriers.

The proposed cause of action, however, does not make any changes in the legal standards governing proof of causation, and I am not convinced that the provision which renders certain studies admissible into evidence makes any great change in existing law. The provision applies only to "relevant" evidence, and admissibility remains "subject" to Federal Rules of Evidence 402 and 403. The absence of any change in the barrier to plaintiffs posed by proof of causation is mitigated, nevertheless, by the provisions relating to petitions for health effects studies and to the

underwriting of litigation costs. Such provisions may, in many instances, enable plaintiffs with meritorious claims to meet the difficult burden which current legal standards impose upon them.

3. From the view of the plaintiff's attorney, which is more important: access to the Federal courts or the alterations in theories of liability and the changes in the Federal rules of evidence which would apply under the proposed Federal Cause of Action?

Both access to federal courts and alterations in theories of liability are important. Moreover, the creation of a federal cause of action would accomplish more than opening the doors of the federal courthouse to plaintiffs. By establishing minimum uniform national standards, a federal cause of action would modify the behavior of national industries more effectively than establishment of statutory toxic torts by a few states. Nevertheless, as a practical matter, I believe that many toxic tort cases will in fact be tried in federal court under diversity jurisdiction, whether or not a federal cause of action is adopted. I do not believe that merely expanding the jurisdiction of federal courts to hear non-diversity claims would be sufficient. Rather, I would favor changes in the law to eliminate the barriers described in number 2 above.

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August 13, 1984

Committee on Environment and
Public Works
United States Senate
Washington, D. C. 20510

ATTN: Jon Jewett

Re: Superfund Hearings: Responses to Questions
Addressed by Senator Simpson to A. Stephens Clay

Question 1: If the Federal government finances plaintiffs' litigation costs, won't that enable plaintiffs with weak claims to in effect "blackmail" defendants into unjustified settlements by threatening to impose massive litigation costs upon them? What deterrent to unjustified claims would exist if a losing plaintiff has no obligation to pay the government back?

A. The Federal government should not finance plaintiffs litigation costs. However, where indivduals can demonstrate to EPA that they have experienced substantial exposure to a hazardous chemical, EPA should grant them Superfund monies to finance the medical evaluations and clinical studies necessary to determine whether the exposure has caused or is likely to cause injury or illness. Otherwise, many persons exposed will never know whether their exposure has caused or is likely to

cause them significant injury; they may get sick, but they will not know why. They will be caught in a "catch 22" where they cannot afford the medical evaluations they require unless they file and win a lawsuit, but cannot establish damages in such a lawsuit because they have no medical evaluations.

B. Where either the plaintiffs or the government can prove that the plaintiffs' exposure was caused by a particular defendant, that defendant should be liable for the costs (whether paid by the Fund or by the plaintiffs) associated with the plaintiffs' efforts to find out whether the exposure has caused or will cause physical illness or injury, without regard to whether defendant is liable for any such illness or injury. The plaintiffs - or potential plaintiffs - may find they have not been injured despite the exposure, and that they have no viable claim for damages. The persons responsible for the exposure, and the resulting need for medical evaluations, should nevertheless be responsible for the cost of these evaluations. Again, I emphasize that the plaintiff first should be required to prove substantial exposure to a hazardous chemical; anyone who can carry that burden of proof does not have a "weak claim".

C. My experience as a litigator is evenly divided between representing plaintiffs and representing defendants. I have never seen a defendant "blackmailed" by a "weak claim" or by the damages allegedly associated with such a claim. Juries and judges can be trusted to separate the good claims from the bad. Defendants confronted with weak claims should and typically will try them. If they try them properly, they will win them. The "blackmail" excuse usually is made by a defense lawyer who is urging his client to settle because the lawyer lacks confidence in his ability to win the case, but wants something beyond his control to blame.

D. If the only persons eligible for Federal assistance in health evaluations must first prove substantial exposure to a hazardous chemical, and if EPA has discretion with respect to the nature of the evaluations to be financed from the fund, there will be no need for deterrence; by its terms, the claim will be "justified".

Question 2: Would the proposed Federal Cause of Action eliminate the most important barriers to recovery that are now faced by plaintiffs in toxic tort cases?

The most significant barrier to recovery now faced by plaintiffs in toxic tort cases is financing proof of a causal connection between the exposure and a particular illness or injury.

Causation can be proven in many cases, but only at substantial expense. The effects of substantial exposure to hazardous chemicals often are not well known and are difficult to determine. The proposed Federal Cause of Action would not affect this crucial aspect of such toxic tort cases.

The second greatest barrier to recovery is the time required to litigate such cases, particularly in state courts which do not have adequate personnel or financial resources to handle mass disaster litigation. Creation of a Federal Cause of Action would make this barrier less substantial.

Insofar as the strict liability aspects of the Federal Cause of Action are concerned, proof of negligence is not a significant barrier to recovery in toxic tort cases. Accordingly, a Federal Cause of Action providing for strict liability, while helpful to the plaintiffs, certainly is not indispensable and would not eliminate any important barriers to recovery. The primary virtue of such a cause of action would be increased uniformity and predictability in the results of litigated cases. Increased predictability would facilitate reasonable settlements and encourage conduct conforming to the standard of care thus established.

Additionally, if a uniform federal statute of limitations adopting the "discovery of the injury and its cause" concept which determines the applicable limitations period under the Federal Tort Claims Act and other Federally created causes of action were adopted for the Federal Cause of Action, the liability theories would not require any modification.

Question 3: From the view of the plaintiffs' attorney, which is more important: access to the Federal courts or the alterations in theories of liability and the changes in the Federal Rules of Evidence which would apply under the Federal Cause of Action?

Access to the Federal Courts is substantially more important than the other changes proposed in the theories of liability and in the evidence rules. If plaintiffs have a federal forum, a discovery limitations period, and access to Superfund monies for health studies upon a proper showing of exposure, they will not need any expanded liability theories or changes in the rules of evidence.

If I can be of further assistance, please advise.

Sincerely,

A. Stephens Clay

ASC/sc

STATEMENT

OF THE

AMERICAN INSURANCE ASSOCIATION

BEFORE THE

SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

CONCERNING

SUPERFUND: FEDERAL CAUSE OF ACTION

JULY 31, 1984

The American Insurance Association represents 173 insurance companies whose membership provides the majority of commercial liability insurance in the United States. Our member companies have striven to provide insurance coverage for harms caused by pollution because we feel this coverage is, and increasingly will be, necessary for American industry.

Our member companies' experience has not been encouraging. Legislatures, both state and federal, have tended to address the issue of environmental harm by developing insurance regulatory requirements and liability systems at odds with economic reality. This has discouraged the development of a healthy market for environmental liability insurance. The early market which emerged in 1980 has constricted. Enactment of a Federal cause of action such as that contained in draft proposals of the Senate Committee on Environment & Public

Works would entirely foreclose the ability of insurers to provide liability insurance to businesses involved in the production, treatment, storage, transportation and disposal of hazardous substances.

Our concerns reflect those of our current and potential customers, as well as the national interest in assuring that the problem of hazardous substances be dealt with in the most expeditious and equitable manner. The following are our basic concerns.

CREATION OF A FEDERAL CAUSE IS NOT WARRANTED

The Senate draft proposals would create an unprecedented Federal cause of action for persons allegedly injured due to exposure to hazardous substances. This is premised on the notion that the current common law system is not adequately responding to these claimants. There is no evidence to support this premise.

This past year alone, settlements in cases involving hazardous substances -- Love Canal ($20 + million) (1984), Agent Orange ($180 million) (1984), asbestos (over $1 billion spent in the past four years), DDT (Olin case $24 million) (1983), dioxin (Pratt v. Independent Petro-chemical $2.6 million) (1983) -- have demonstrated that the tort system is responding to environmental liability and the liability for hazardous substance exposure. These are cases which have made their way through the liability system and have resulted in judgments or settlements where there were none of a similar nature as recently as 1980.

The lack of any reliable scientific showing of need for such sweeping legislative reform was recognized by the "301(e) Superfund Study Group" when it recognized"... at this time, in mid-1982 it is impossible to determine the

number of persons who have been injured or who could be injured by exposure to such sites." (Report at 20) Please note that the 301(e) Study Group, commissioned by Congress to study the subject, agreed that a Federal cause of action for harms due to exposure to hazardous substances was not advisable. In the absence of empirical evidence demonstrating that there are vast numbers of claimants precluded by the common law tort system of the states, it would be inappropriate to structure a Federal cause of action.

A FEDERAL CAUSE OF ACTION IS DISRUPTIVE OF LEGAL SYSTEM & COSTLY TO AMERICAN INDUSTRY

Enactment of a Federal cause of action would emasculate emerging state common law toxic tort development, result in an increased financial burden on and clogging of the Federal court system, and increase legal transaction costs.

A major concern of the business and insurance communities is that the Congressional proposals attempt to assist claimants in making recoveries by providing them with reduced burdens of proof and a lesser standard of reliability and relevancy for evidence. This places a burden on defendants which is substantially greater than that which currently exists for claimants, and would result in a much greater magnitude of error in the judicial desision-making process. The economic implications of such changes to our legal system are overwhelming. When one considers that the damages recoverable under this cause of action include medical expenses, rehabilitation costs, burial expenses, loss of income or profits, and pain and suffering and punitive damages, the potential amount of dollars recoverable is staggering.

We urge Congress to consider the efforts which state courts are making to broaden traditional legal concepts or to develop new ones to deal with the

evidentiary and legal aspects of this issue. We believe that these forums are the proper place for fair and equitable resolution to these complex issues.

ENACTMENT OF TOXIC TORT LEGISLATION WOULD NOT ENHANCE THE ENVIRONMENTAL CLEANUP PROGRAM

The absolute liability approach taken by the Congressional proposals precludes the court from considering the nature of the conduct and activities of the defendants, or if any exists, the causative responsibility of the claimant or plaintiff. The Senate draft characterizes the bill's liability as "strict" but in effect it is absolute because the only defenses allowable are an act of God, war, or that of an unrelated third party. When liability is found regardless of the activities of the defendant, and when the defendant is stripped of normal tort law defenses, what incentive is there for one engaged in the handling of hazardous substances to conduct his activities as safely as possible?

Liability for all defendants is to be joint and several under these proposals, further adding to the disincentives to good conduct. If one is to be judged not on the basis of degree of care taken but on the size of one's pocketbook, we fear that efforts to prevent future harm from hazardous substances will not be substantial.

Finally, in our view the prompt cleanup of hazardous sites is and should remain the principal objective of the Superfund law. By commingling in the Superfund law enforcement actions which are important to society as a whole with individual claims for personal injury or property damage and placing both types of actions in the Federal courts, Congress hampers the ability of the Federal courts to deal swiftly with questions concerning abatement or cleanup of hazards to our environment.

PROPOSALS WOULD SIGNIFICANTLY
AFFECT GOVERNMENTAL ENTITIES

The definition of "person" in CERCLA includes "the United States government, State, municipality, commission, political subdivision of a State, or any interstate body". Further, sovereign immunity would seem to be inapplicable as liability under this Federal cause of action is imposed "notwithstanding any other provision or rule of law" and subject only to the defenses noted above (act of war, act of God, act of an unrelated third party).

Since disposal of hazardous substances is a major function of local, federal, and state governments, we feel that Congress should consider how these proposals would affect the economic well-being of these entities. We would point out that already under state common law, local governments engaging in hazardous waste disposal may be subject to extensive liability. (Ayers v. Jackson Township, 1984, resulted in a settlement of $15.6 million to 97 Jackson Township families.) Since many activities of the Federal government involve the handling of hazardous substances, extensive liability exposure would be created for the Federal government as well.

OTHER CONCERNS: DEFENDANT-FINANCED DISCOVERY,
OVERLOADING FEDERAL JUDICIARY,
RETROACTIVE LIABILITY, SPECULATIVE DAMAGES

These proposals would require defendants or the Federal Superfund to finance the costs of bringing suit. The Senate draft proposal would allow the Superfund to be used for advances to groups of individuals exposed to a hazardous substance "for the costs of information gathering, discovery, expert witnesses and other activities involved in the litigation of claims."

These proposals would eliminate diversity of citizenship and dollar limitations on access to Federal courts. They would expose an already over-burdened Federal judiciary to thousands of tort claims for small

amounts. Federal diversity of citizenship requirements and the $10,000 threshold for amounts in controversy were enacted to keep out of Federal courts matters that could be heard in state or local tribunals.

Delays which would result from a reduced plaintiff's burden of proof and the elimination of the threshold dollar amount and federal diversity of citizenship requirements will result in further crowding of Federal court calendars, contributing to further delay with cleanup of hazardous sites. The AIA believes that cleanup and containment of hazardous substances at waste disposal sites should be the highest priority of the Congress and EPA. This objective will be retarded if the Federal cause of action is enacted.

The draft cause of action provides for the recovery of damages, including pain and suffering and punitive damages, for "personal injury", a term far more ambiguous than the traditional concept of "bodily injury". Utilization of the term "personal injury" allows the court to award damages for psychic harm such as phobias or increased risk of future harm. These types of damages have been considered remote and speculative unless coupled with physical impact or harm.

Finally, the bill's retroactive application of a new liability scheme raises serious questions of fairness and constitutionality. The AIA recommends that utilization of the cause of action be prospective only, thereby eliminating all retroactive application.

CONCLUSION

The provision of insurance to service liability associated with a toxic tort system is, at best, extremely difficult. A vast majority of fact situations associated with toxic tort damages involve nonsudden, repeated or

continuous discharges. Toxic discharge may result in long latency diseases with multiple causes. Environmental Impairment Liability (EIL) insurance coverage is designed to service these types of exposures. This market has developed since the enactment of CERCLA and the conclusion of the rulemaking process associated with financial responsibility requirements in RCRA. This fragile market consists of approximately ten primary insurers which actively solicit policyholders. The market has constricted during the last year, and fewer insurers are providing environmental impairment liability insurance coverage today than in 1983.

The concepts contained in the federal toxic tort cause of action are both controversial and complex. The nearly absolute liability approach taken in the cause of action which does not allow for apportionment of liability and appropriate defenses does not lend itself to underwriting procedures which are based on the individual policyholder's past conduct and experience. The liability exposure created by the CERCLA Reauthorization discussion draft is not an insurable risk, and an already cautious environmental impairment liability insurance market will not provide the necessary insurance protection.

NATIONAL CONSTRUCTORS ASSOCIATION

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STATEMENT FOR THE RECORD

Committee on Environment and Public Works

The United States Senate

July 31, 1984

Mr. Chairman:

The National Constructors Association appreciates this opportunity to express its views regarding legislation reauthorizing and amending the Superfund hazardous waste cleanup program. Our comments are submitted for the record as part of hearings before the Senate Environment and Public Works Committee held on July 31, 1984.

The National Constructors Association represents fifty of the largest U.S. firms engaged in the design and construction of major industrial, commercial, and process facilities worldwide. Our firms, which are among the most capable in the country in performing remedial cleanup operations, have been and continue to be very supportive of Superfund cleanup programs. We are, however, extremely concerned about provisions in legislation currently under consideration in the House of Representatives (HR 5640), which would establish new and unprecedented potential liabilities for any firm even remotely involved in the production or handling of "hazardous" substances. Our comments before this Committee address the substance and approach of that measure.

34-873 3706

Summary Overview

Having reviewed HR 5640 in some detail, it is the opinion of the National Constructors Association that the following issues are raised by the legislation which require extensive consideration by this Committee as part of these hearings:

- In our opinion this bill would completely revamp existing tort law with respect to toxic and other hazardous substances without benefit of adequate public hearings or review.

- Under Title II of the bill, liability can attach even though the "release or threatened release" of a hazardous substance is within present federal standards, complies with governmental regulations or other law, and conforms to the present state of the art in the industry. In short, any release or disposal may result in liability. For example, a company that disposes of hazardous substances properly could be liable without fault for any problems in the future.

- Because there is no cap on potential liability and because liability is imposed for non-negligent conduct that conforms to the law, many businesses including remedial action contractors will be unable to afford or obtain environmental liability insurance.

- Those uninsurable risks under HR 5640 will effectively prevent most responsible firms from bidding on remedial contract work.

- There is absolutely no cap on the exposure to each firm under Title II liability.

- The bill has a retroactive application which makes preenactment conduct subject to the same liability.

- Projected costs of Superfund litigation to the government alone would inflate the cleanup costs far above the proposed $9 billion funding level.

HR 5640 Will Dramatically Alter Our Civil Tort System

Title II of HR 5640 would completely revamp existing tort law with respect to liability arising out of exposure to hazardous substances. This bill creates a wholly new tort with unprecedented, untoward and unknown ramifications for industry and our system of jurisprudence.

Under Title II, any person who owns or operates any place where a hazardous substance is found or who arranges to transport such material is liable without fault for damage to property, diminution in the value of property, or personal injury resulting from exposure to a hazardous substance. This liability occurs even though the person held responsible used the highest standard of care in accordance with the state of the art in that particular industry, fully complied with all federal and state laws and regulations, and conformed to what has previously been accepted to be the common law of the nation.

The liability created by Title II is not strict liability -- it is absolute liability. Under traditional concepts of strict liability, liability does not attach where the activity in question conforms to the technological and scientific state of the art. Additionally, strict liability, as it is known today, permits courts and juries to weigh the conduct of the parties and to balance the risk of an activity against the social and economic utility of that activity. No such considerations are permitted by Title II. Rather, the sole defenses to liability are an act of God, act of war, or an act of an unrelated third party. Compliance with the state of the art is not a defense. Compliance with federal or state standards is not a defense. The fact that an activity is done under the direction or under the color of governmental authority is not a defense. All of this is not merely frightening in its retroactive effect, but it is a continuing problem that will spawn a world of litigation.

Like the Product Liability Act, which was recently reported by the Senate Commerce, Science and Transportation Committee, Title II seeks to revamp and federalize an area of tort law. Unlike the Product Liability Act, however, there have been no analyses, hearings or studies to gain an understanding of the full implications of this new tort. In fact, the Congressional Budget Office Cost Estimate on HR 5640 specifically states that its:

> "estimate does not include costs to the federal government of Title 2 (relating to federal cause of action). Potential impacts include an increase in the caseload of federal courts if litigation is encouraged by this provision. At this time, it is impossible to determine the magnitude of such potential costs. Also if the federal government were to be included as a liable party under Title 2, the costs to the federal government could be significant."

In short, Title II and the subject of hazardous waste liability deserve and require further study before Congress creates a scheme of liability for hazardous substance exposure on a national scale.

The Adverse Impact of Title II on Remedial Action Contractors Would Hamper Clean-up Efforts

Under Section 202 (a)(1) of Title II, any person who "operates" a facility (i.e. any place where a hazardous substance has "come to be located") is strictly liable for damages which result from exposure to a hazardous substance. Additionally, under Section 202 (a)(3) and (4) any person who arranges for the disposal of a hazardous waste or who transports such waste is similarly liable.

A remedial contractor who engages in the cleanup of hazardous substances falls within these categories of potential liability. Because there is no cap on liability and

because liability is imposed for non-negligent conduct that conforms to the law, qualified, financially responsible companies will be discouraged, if not prevented, from engaging in cleanup work. Moreover, because Title II substantially changes the standard of liability for businesses with exposure to pollution liability and makes it impossible to rate potential liability, the insurance industry has warned that it may not be possible to obtain insurance coverage for remedial work. At a minimum, the cost of insurance will be prohibitive. As a consequence, fly-by-night companies which are not financially sound and which are less competent may well enter the field to take advantage of the vacuum created by the inability and unwillingness of established firms to engage in such Congressionally-mandated high-risk activity. The effect, of course, would be contrary to the goals of the original Superfund legislation.

In short, if there is to be a federal, strict liability cause of action, sound public policy requires that remedial contractors be exempted from such liability.

Some Suggested Solutions

In order to further the goals of the current Superfund law, reauthorization legislation should be drafted in such a way that remedial contractors are exempted from liability provisions such as those imposed by Title II of HR 5640. Additionally, in order to mitigate the harshness and inequity of Title II liability, the legislation should be amended to provide that the strict liability standard does not apply where the release of a hazardous substance was done under the direction of or under the color of governmental authority, such as federally permitted releases, or where the release was in compliance with the technological and scientific state of the art in existence at the time of the release.

Finally, the definition of "owner or operator" as applied to Title II needs further clarification to limit its scope. At present, an operator or owner is defined merely as

a person who owns or operates a facility. Clearly, Congress does not intend to include those persons who provide any consulting, planning, engineering, design, or construction services in connection with a facility when they do not otherwise own or operate such a facility. Such persons should be exempted so that a contractor is not subject to Title II liability simply by virtue of the fact that it constructed the "facility" upon which the release occurs. Clearly, the intent is to impose liability on persons who are connected with and responsible for the release itself.

Conclusion

It is premature and unwise for Congress to enact a national system of compensation for injury resulting from exposure to hazardous substances through the establishment of a new federal tort without first examining extensively the effects which the legislation will have on the original goals of the Superfund legislation and evolution and direction of tort law, not to mention its impact on the business community, the consumer, the courts, and the construction industry. The federal, strict liability cause of action set forth in Title II of HR 5640 is not an environmental issue. It is a legal and public policy issue, whose resolution demands study. Because the current Superfund authorization does not expire until September 30, 1985, there is time to study the far-reaching impact of Title II. The implications of the legislation are far too great to allow its hasty passage.

USBORAX

TESTIMONY ON ENVIRONMENTAL TAX ON CERTAIN CHEMICALS
IN THE "SUPERFUND" BILL
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
JULY 30, 1984

U.S. Borax opposes the inclusion of boron trioxide in the list of chemicals subject to an environmental tax proposed in Section 504 of H.R. 5640. Boron trioxide, unlike many of the other newly added feedstocks, is neither hazardous nor toxic according to current law and toxicity tests reported by the Dept. of Commerce.

H.R. 5640 is expected to be marked up by Ways and Means on Wed., August 1, and reported out of committee on Friday, August 3.

Boron trioxide is produced by dehydration of boric acid, a weak acid used in medicinal preparations such as eyewashes and astringents; no hazardous wastes are generated during the manufacture of boron trioxide. Boron trioxide itself is a stable compound used in the preparation of fluxes, special enamel and glass compositions and abrasives.

Including boron trioxide in Sec. 504 would cause serious marketing problems for our shelf products such as BORAXO POWDERED HAND SOAP and 20 MULE TEAM BORAX; it would imply that products made from boron compounds are in some way toxic or hazardous.

U.S. Borax is the only producer of pure boron trioxide in the United States. It is sold as anhydrous boric acid. Annual production of the pure chemical is 1,800 tons, while the total boron trioxide content of all our products is 750,000 tons. Of this figure, 62-65% has been exported each year over the past 25 years; almost 16,000 tons has been dedicated to the fertilizer industry over the last five years.

In an EPA study of 881 hazardous waste sites, some boron compound was detected at nine sites. The nature of the derivative has not yet been disclosed to either the Congress or the public. Boron trioxide itself was not detected; some waste was found which, when traced back through its chain of production, indicated the presence of a boron compound.

For inclusion in Section 504, these 20 chemicals must have satisfied one or more of the criteria listed in the Energy and Commerce report to H.R. 5640. These criteria, along with boron trioxide's applicability to same, are set out below.

Given all the available information, the only criteria which boron trioxide satisfies are that it is "produced in significant volumes" and "was found, in its raw, intermediate or final product forms" at 9 waste sites. Nevertheless, H.R. 5640 calls for subjecting boron trioxide to an annual tax of $11,205,000.00.

SELECTION CRITERIA USED UNDER CURRENT LAW

1. The generation of significant volumes of hazardous wastes during the manufacture of the taxable substance and its intermediate or final products.

   -- Boron trioxide is the basic ion found in boric acid and borax. It does not exist in nature; it is manufactured as such. U.S. Borax adds sulphuric acid to the mined ore to produce boric acid. Boron trioxide is generated by dehydration of boric acid (i.e., removal of water). No hazardous wastes are generated during the manufacture of boron trioxide.

2. The hazardous nature of the taxable substance in any of its forms (including its intermediate or final products).

   -- Boron trioxide is not hazardous in any of its forms. The toxicity of boron trioxide is documented in a U.S. Department of Commerce report (#PB 161771), dated January 1960. This report states "no toxic signs were evident in any of the animals" (studies were conducted on dogs and rats using inhalation and feeding methods of study).

   -- Boron trioxide is not listed in the Annual Report of Carcinogens by the U.S. Department of Health and Human Services and is not under consideration by the National Toxicology Program. There are no toxicity data other than reports on skin and eye irritation on rabbits reported in the National Institute of Occupational Safety and Health's Registry of The Toxic Effects of Chemical Substances, which is based on a review of the published literature on chemicals.

   -- Boron trioxide is a white solid chemical. It is a stable compound which softens or melts, depending on whether it is amorphous or crystalline, between 325 and 500 degrees Centigrade (617 and 932 degrees Fahrenheit). It is a hygroscopic material; it takes up moisture from the atmosphere to form boric acid.

3. The capability of the taxable substance to increase the hazard potential of other substances (e.g., acids may accelerate the release of other hazardous wastes into the environment).

   -- This cannot be determined without knowing the derivative of boron trioxide which was detected at the nine sites.

4. The production of the taxable substance in significant volumes.

   -- U.S. Borax annually produces 1,800 tons of pure boron trioxide, while the total boron trioxide content of all our products is 750,000 tons. Of this figure, 62 - 65 percent has been exported each year over the past 25 years; almost 16,000 tons have been dedicated to the U.S. fertilizer industry over the last five years.

NEW CRITERIA UNDER H.R. 5640

1. The taxable substance was found, in its raw, intermediate or final product forms at known Superfund sites identified and evaluated by EPA.

   -- According to EPA, boron trioxide (as boron trioxide) was not detected at any of the sites. Boron trioxide is alleged to be a feedstock of a waste detected at nine of the 881 sites.

2. Hazardous wastes generated in the manufacture of the taxable substance or its intermediate and final products have been found at known Superfund sites identified or evaluated by EPA.

   -- No hazardous wastes are generated in the manufacture of boron trioxide, and boron trioxide was not detected as boron trioxide in any of the 881 sites.

3. The taxable substance at issue would be covered by the definition of "hazardous substance" contained in current law.

   -- Boron trioxide:

      * is not a hazardous substance as designated in Section 311 (b)(2)(A) of the Federal Water Pollution Control Act;

      * does not present substantial damage to the public health or welfare or the environment under Sect. 102 of CERCLA;

      * is not listed as a hazardous waste under Section 3001 of the Resource Conservation and Recovery Act of 1976;

* is not considered a toxic pollutant under Section 307 (a) of the Federal Water Pollution Control Act;

* is not listed as a hazardous air pollutant under Section 112 of the Clean Air Act;

* is not considered an imminent hazard in Sect. 7 of the Toxic Substances Control Act; and

* does not qualify as a pollutant nor contaminant as defined in Section 102 (a)(1) of H.R. 5640.

In summary, there is no scientific or economic justification for taxing boron trioxide as a hazardous substance, a hazardous pollutant or a hazardous contaminant, and it should be deleted from the amended list of chemical substances proposed in Section 504 of H.R. 5640.

98TH CONGRESS
2D SESSION

S. 2892

To amend the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

IN THE SENATE OF THE UNITED STATES

JULY 31 (legislative day, JULY 30), 1984

Mr. STAFFORD (for himself and Mr. RANDOLPH) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To amend the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Superfund Amendments of 1984".

REPORTING OF AND RESPONSE TO RELEASES FROM UNDERGROUND TANKS

SEC. 2. (a) DEFINITION OF UNDERGROUND STORAGE TANK.—Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking "and" at the end of paragraph (31),

striking the period at the end of paragraph (32) and substituting "; and", and by adding the following new paragraph:

"(33) 'underground storage tank' means any one or combination of tanks, including underground pipes connected thereto, designed to contain an accumulation of gasoline or other petroleum substances which are liquid at atmospheric pressure and temperature and which is substantially or totally beneath the surface of the ground.".

(b) DEFINITION OF HAZARDOUS SUBSTANCE.—Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by—

(1) striking "and" before "(F)";

(2) inserting immediately before the period at the end of the first sentence the following: ", and (G) any petroleum substance contained in an underground storage tank."; and

(3) striking "The term does not include" and substituting "Except as provided in subparagraph (G), the term does not include".

(c) Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following subsection:

"(l) For the purposes of subsection (a) (3) or (4) of this section, the term 'person' does not include one who has sold

or delivered a petroleum product intended for resale or use which is subsequently stored in an underground storage tank.".

COST RECOVERY FOR RESPONSES TO RELEASES OF POLLUTANTS OR CONTAMINANTS

SEC. 3. Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by—

(a) adding after "hazardous substance" each place it appears, the phrase ", pollutant or contaminant"; and

(b) adding after "hazardous substances" each place it appears, the phrase ", pollutants or contaminants".

LISTING OF POLLUTANTS AND CONTAMINANTS AS HAZARDOUS SUBSTANCES

SEC. 4. Section 102(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding at the end thereof the following: "Not later than one year after the initiation of response under section 104(a) with respect to a pollutant or contaminant, the Administrator shall decide, and publish such decision, whether to designate such pollutant or contaminant as a hazardous substance under this subsection. If the Administrator decides affirmatively, the Administrator shall simultaneously promulgate such designation as an interim final regulation.".

INCREASED CRIMINAL PENALTIES

SEC. 5. (a)(1) Section 103(b) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended—

(A) by striking out "$10,000" and inserting in lieu thereof "$20,000"; and

(B) by striking out "one year" and inserting in lieu thereof "five years".

(2) Section 103(c) of such Act is amended—

(A) by striking out "$10,000" and inserting in lieu thereof "$20,000"; and

(B) by striking out "one year" and inserting in lieu thereof "five years".

(3) Section 103(d)(2) of such Act is amended—

(A) by striking out "$20,000" and inserting in lieu thereof "$40,000"; and

(B) by striking out "one year" and inserting in lieu thereof "five years.".

(4) Section 106(b) of such Act is amended by striking out "$5,000" and inserting in lieu thereof "$50,000".

(b)(1) Section 309(c) of the Clean Water Act is amended to read as follows:

"(c)(1) Any person who (A) negligently violates section 301, 302, 303, 306, 307, 308, 318, or 405 of this Act, or any permit condition or limitation implementing any of such

sections in a permit issued under section 402 of this Act by the Administrator or by a State, or any requirement imposed in a pretreatment program approved under section 402(b)(8) of this Act or in a permit issued under section 404 of this Act by the Secretary of the Army or by a State, or who (B) knowingly introduces into a sewer system or into a publicly owned treatment works any pollutant or hazardous substance which causes or may reasonably be anticipated to cause personal injury or property damage, or causes such treatment works to violate any effluent limitation or condition in any permit issued to the treatment works under section 402 of this Act by the Administrator or a State, shall be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or by both.

"(2) Any person who (A) knowingly violates section 301, 302, 303, 306, 307, 308, 318, or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act by the Administrator or by a State, or any requirement imposed in a pretreatment program approved under section 402(b)(8) of this Act or in a permit issued under section 404 of this Act by the Secretary of the Army or by a State, or who (B) negligently introduces into a sewer system or into a publicly owned treatment works any pollutant or hazardous substance

which causes or may reasonably be anticipated to cause personal injury or property damage, or causes such treatment works to violate any effluent limitation or condition in any permit issued to the treatment works under section 402 of this Act by the Administrator or a State, shall be punished by a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than five years, or by both.

"(3) Any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this Act, shall upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or by both.

"(4) If a conviction is for a violation of paragraph (1), (2), or (3) of this subsection committed after a first conviction of such person under the same paragraph, the maximum punishment under the respective paragraph shall be doubled with respect to both fine and imprisonment.

"(5) For the purpose of paragraphs (1), (2), and (3), the term 'person' shall mean, in addition to the definition contained in section 502(5) of this Act, any responsible corporate officer.

"(6) For the purpose of paragraphs (1) and (2), the term 'hazardous substance' shall mean (A) any substance designated pursuant to section 311(b)(2)(A) of this Act, (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of this Act, and (E) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act'.

(2) Section 309(d) of the Clean Water Act is amended by striking "$10,000" and inserting in lieu thereof "$25,000".

(3) No State shall be required to modify a permit program approved or submitted under section 402 of the Clean Water Act as a result of the amendment made by this subsection before July 1, 1986.

COMMUNITY RELOCATION

SEC. 6. (a) The second sentence of paragraph 23 of section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by in-

serting after "not otherwise provided for," the phrase "costs of permanent relocation of residents where it is determined that such permanent relocation is cost effective or may be necessary to protect health or welfare," and by striking out the semicolon at the end thereof and inserting in lieu thereof a period and the following: "In the case of a business located in an area of evacuation or relocation, the term may also include the payment of those installments of principal and interest on business debt which accrue between the date of evacuation or temporary relocation and thirty days following the date that permanent relocation is actually accomplished or, if permanent relocation is formally rejected as the appropriate response, the date on which evacuation or temporary relocation ceases. In the case of an individual unemployed as a result of such evacuation or relocation, it may also include the provisions of the assistance authorized by sections 407, 408, and 409 of the Disaster Relief Act of 1974;".

(b) Section 104(c)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting before "authorized by subsection (b) of this section," the phrase "for permanent relocation or".

PUBLICLY OWNED AND OPERATED FACILITIES

SEC. 7. (a) Section 104(c)(3)(C)(ii) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended to read as follows:

"(ii) 50 per centum (or such greater amount as the President may determine appropriate, taking into account the degree of responsibility of the State or political subdivision for the release) of the capital, future operation, and future maintenance costs of the response action relating to a release at a facility, primarily used for treatment, storage, or disposal, that was owned and operated by the State or a political subdivision thereof at the time of any disposal of hazardous substances in such facility. For the purpose of subparagraph (c)(ii) of this paragraph, the term "facility" does not include navigable waters or the beds underlying those waters.".

(b) Section 104(c)(3) of the Comprehensive Response, Compensation, and Liability Act of 1980 is amended by adding at the end thereof the following:

"In the case of any State which has paid, at any time after the date of the enactment of the Superfund Amendments of 1984, in excess of 10 per centum of the costs of remedial action at a facility owned but not operated by such State or by a political subdivision thereof, the President shall use money in the Fund to provide reimbursement to such State for the amount of such excess.".

TOXICOLOGICAL DATA

SEC. 8. (a) Section 104(i) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by—

(1) in paragraph (5) striking all language after "illness." and inserting in lieu thereof the following: "In cases of public health emergencies declared by a Federal or State public health official authorized by Federal or State law to make such declarations, exposed persons shall be eligible for admission to and treatment at hospitals or other facilities which provide medical care or assistance. The costs of such treatment shall be treated as removal costs for the purposes of this section.";

(2) redesignating paragraphs (1) through (5) as subparagraphs (A) through (E) respectively, by inserting "(1)" after "(i)", and by adding at the end thereof the following:

"(2)(A) The Administrator shall, within six months after the date of enactment of the Superfund Amendments of 1984, prepare a list of at least one hundred hazardous substances, pollutants, or contaminants which the Administrator, in his sole discretion, determines are most often released into the environment or found at the location of responses under section 104 or at facilities on the National Priority List.

Within twenty-four months after enactment, the Administrator shall prepare a list of an additional one hundred or more such hazardous substances, pollutants or contaminants. The Administrator shall not less often than once every year thereafter add to such list other substances which are frequently so found or otherwise pose a potentially significant threat to human health by reason of their physical, chemical, or biological nature.

"(B) For each such hazardous substance, pollutant or contaminant listed pursuant to subparagraph (A), the Administrator shall, following a review of existing literature, initiate a program of research designed to determine the health effects (and techniques for development of methods to determine such health effects) of such substance, both by itself and in combination with other substances with which it is commonly found. Such program shall include, but not be limited to—

"(i) Laboratory and other studies to determine short, intermediate, and long-term health effects;

"(ii) laboratory and other studies to determine organ-specific, site-specific, and system-specific acute and chronic toxicity;

"(iii) laboratory and other studies to determine the manner in which such substances are metabolized or to

otherwise develop an understanding of the biokinetics of such substances; and

"(iv) where there is a possibility of obtaining human data, the collection of such information.

"(C) Based on the data developed and collected on the health effects of hazardous substances, the Administrator shall prepare toxicological profiles sufficient to establish the likely effect on human health of each of substances listed pursuant to subparagraph (A). Such profiles shall be revised and republished as necessary, but no less often than once every five years. The costs of conducting such research and preparing profiles shall be treated as response costs for purposes of recovery under section 107.

"(3)(A) Any individual or group of individuals or any State or local public health authority or any licensed physician may submit a petition to the Administrator providing evidence that—

"(1) such individual or individuals are or have been exposed to a hazardous substance, pollutant or contaminant;

"(2) such exposure has resulted or is resulting in levels of ill health in excess of what is to be expected; and

"(3) the probable source of such exposure is a release under the Act.

"(B) Within sixty days of receiving a petition under subparagraph (A), the Administrator shall initiate a health study under subparagraph (C) or determine and provide a written explanation of such determination that such a health study is unwarranted. Such a determination shall constitute final agency action for purposes of judicial review under this Act or the Administrative Procedures Act.

"(C) Each health effects study carried out under this subsection shall—

"(i) ascertain the nature, magnitude, scope, and duration of the exposure of individuals to the hazardous substance concerned;

"(ii) identify, where possible, other individuals within the community who may be exposed to the same release; and

"(iii) include but not be limited to—

"(I) a determination, where possible, of the source of any groundwater contamination involved;

"(II) a toxicological and epidemiological evaluation of each hazardous substance involved; and

"(III) any necessary medical testing of individuals.

"(D) If a health effects study carried out under this section contains a finding that the exposure concerned presents a significant risk to human health, the President shall take such steps as may be necessary to eliminate the significant risk to human health. Such steps may include (but shall not be limited to)—

"(1) provision of alternative household water supplies, and

"(2) permanent or temporary relocation of individuals.

"(E) In the case of any substance which is the subject of a petition under this paragraph, nothing in this paragraph shall be construed to delay or otherwise affect or impair the authority of the Administrator of the Environmental Protection Agency to exercise any authority vested in the Administrator under any other provision of law (including but not limited to the imminent hazard authority of section 7003 of the Solid Waste Disposal Act) or the response and abatement authorities of this Act.

"(4) In the implementation of this subsection and other health-related authorities of this Act, the Administrator of the Agency for Toxic Substances and Diseases Registry—

"(A) is authorized to provide for peer review where appropriate; and

"(B) shall establish and maintain a program of clinical training for physicians and other health professionals.

"(5) For the purpose of implementing this subsection and other health-related authorities of this Act, the President shall provide adequate personnel to the Agency for Toxic Substances and Disease Registry, which shall be no fewer than one hundred full time equivalent employees.".

(b) Section 111(c)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by—

(1) inserting "in accordance with subsection 104(i)" after "(4)"; and,

(2) by striking "epidemiologic studies" and substituting "epidemiologic and laboratory studies and health assessments".

(c) Section 105(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting immediately before "Other" the following: "As part of the response to each of the releases or threatened releases listed, the Administrator of the Agency for Toxie Substances and Disease Registry shall conduct a preliminary assessment of the hazards to human health associated with such release or threatened release. Such assessment shall include a list, prepared by the Administrator of

the Environmental Protection Agency, of all hazardous substances, pollutants or contaminants being released or threatened to be released. If such assessment indicates the possibility of a significant threat to human health, the Administrator shall undertake a health study pursuant to section 104(i)(3)(C). If the Administrator has not previously conducted such an assessment, the Administrator shall, within twelve months after the date of enactment of the Superfund Amendments of 1984, undertake and complete such an assessment.".

(d) Section 111(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking "and" at the end of paragraph (5), by striking the period at the end of paragraph (6) and inserting in lieu thereof "; and", and by adding the following new language:

"(7) payment of any expenses or costs incurred under section 104(i)(3) relating to emergency relief and health effects studies; and

"(8) costs incurred by the Agency for Toxic Substances and Disease Registry in preparing toxicological profiles under section 104(i).".

PUBLIC PARTICIPATION

SEC. 9. Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is

amended by adding at the end thereof the following new subsection:

"(j) Before selection of appropriate remedial action to be undertaken by the United States or a State or before entering into a convenant not to sue or to forebear from suit or otherwise settle or dispose of a claim arising under this Act, notice of such proposed action and an opportunity for a public meeting in the affected area, as well as a reasonable opportunity to comment, shall be afforded to the public prior to final adoption or entry. Notice shall be accompanied by a discussion and analysis sufficient to provide a reasonable explanation of the proposal and alternative proposals considered.".

REPLACEMENT WATER SUPPLIES

SEC. 10. (a) Section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking the period at the end of paragraph (2) and inserting in lieu thereof a semicolon; striking "and" at the end of paragraph (31); striking the period at the end of paragraph (32) and inserting in lieu thereof "; and"; and by adding the following new paragraph:

"(33) 'alternative water supplies' includes, but is not limited to, drinking water and household water supplies.".

(b) Section 104(b) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is

amended by inserting "(1)" after "(b)" and by adding the following new paragraph:

"(2)(A) In any case in which a drinking water supply is closed or restricted by a State, local, or Federal public health officer due to contamination with a hazardous substance or pollutant or contaminant, or in which the presence of a hazardous substance in a drinking water supply constitutes a danger to human health through short-term or long-term exposure, the President shall provide alternative water supplies as a removal action. Such action shall begin within seven days of notice of such closure or restriction or of receipt of evidence of such presence of a hazardous substance.

"(B) In determining whether a drinking water supply is to be closed or restricted, a public health officer shall take into account the recommended maximum contaminant levels, if any, established under the Safe Drinking Water Act for such hazardous substances, pollutants or contaminants.".

NATIONAL CONTINGENCY PLAN

SEC. 11. Section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting "(a)" immediately following "105." and by adding the following at the end thereof:

"(b) Not later than twelve months after the date of enactment of the Superfund Amendments of 1984, the Administrator shall revise the National Contingency Plan to reflect the requirements of such amendments. The portion of such

Plan known as "the National Hazardous Substance Response Plan" shall be revised to provide procedures and standards for remedial actions undertaken pursuant to this Act which are consistent with amendments made by the Superfund Amendments of 1984 relating to the selection of remedial action.

"(c) Not later than twelve months after the date of enactment of the Superfund amendments of 1984, the Administrator shall propose amendments to the hazard ranking system in effect on July 1, 1984. Such proposed amendments shall be published in the Federal Register and otherwise made available for public review and comment to the same manner and extent as regulations promulgated pursuant to the Administrative Procedures Act. Until the effective date of any proposed changes, the hazard ranking system in effect on July 1, 1984, shall continue in full force and effect.".

FEDERAL FACILITIES

SEC. 12. Section 115 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting before the period at the end thereof a colon and the following: "*Provided*, That with respect to a Federal facility or activity for which such duties or powers are delegated to an officer, employee or representative of the department, agency or instrumentality which owns or operates such facility or conducts such activity, the concurrence of the Administrator (and the responsible State official where

a cooperative agreement has been entered into) shall be required for the selection of appropriate remedial action and the authorities of section 106(a) are hereby delegated to the Administrator".

ABATEMENT ACTIONS

SEC. 13. (a) Section 106(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following at the end thereof: "Within eighteen months after the date of enactment of the Superfund Amendments of 1984, the Administrator shall, after consultation with the Attorney General, revise and republish the guidelines published under this subsection to effectuate the responsibilities and powers created by such Amendments.".

(b) Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsection at the end thereof:

"(d) Notwithstanding any other provision of law or rule of law, the Administrator shall establish such administrative procedures as the Administrator deems advisable regarding the opportunity for any person to object to an order issued under subsection (a).".

RECOVERY OF LITIGATION COSTS BY STATE ATTORNEYS GENERAL

SEC. 14. (a) Section 107(g) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding at the end thereof the following: "Notwithstanding the requirements of section 111(a)(3), in any case in which a responsible party is an agency or instrumentality of the United States, the Attorney General of the State in which the release occurred or response costs were incurred, may initiate legal action to recover costs, compel remedial action or otherwise enforce the requirements of this Act or enforce a claim under this Act. The costs associated with such action shall be paid pursuant to section 113(e) of this Act.".

(b) Section 113 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding at the end thereof a new subsection as follows:

"(e) A court, in issuing a final order in any action brought under this Act in which an agency or instrumentality of the United States is a responsible party, may award costs of litigation (including reasonable attorney and expert witness fees) to any State attorney general who prevails or substantially prevails, whenever the court determines such award is appropriate.".

STATUTE OF LIMITATIONS

SEC. 15. Section 112(d) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended to read as follows:

"(d) No claim may be presented, nor may an action be commenced, under this title—

"(1) for the costs of response, unless that claim is presented or action commenced within three years after the date of completion of the response action;

"(2) for damages under subparagraph (C) of section 107(a)(4), unless that claim is presented or action commenced within three years after the date on which final regulations are promulgated under section 301(c); or

"(3) for any other damages, unless that claim is presented or action commenced within three years after the date of the discovery of the loss and its connection with the release in question or the date of enactment of this Act, whichever is later: *Provided, however,* That the time limitations contained in this paragraph shall not begin to run against a minor until he reaches eighteen years of age or a legal representative is duly appointed for him, nor against an incompetent person until his incompetency ends or a legal representative is duly appointed for him. No claim may be presented or

action be commenced under this paragraph for any damages if, prior to the date of enactment of the Superfund Amendments of 1984, the statute of limitations which would otherwise apply under this paragraph has expired.".

COSTS OF LITIGATION

SEC. 16. Section 111(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting after paragraph (4) a new paragraph as follows, and by renumbering succeeding paragraphs:

"(5) advances to groups of individuals (or their dependents) exposed to hazardous substances in connection with a release, for the costs of information gathering, discovery, expert witnesses and other activities involved in the litigation of claims arising from such exposure, but not including any attorney fees, on the condition such advances are repaid to the Fund out of the proceeds of any award or settlement of such claims;".

SELECTION OF REMEDIAL ACTIONS

SEC. 17. Section 104(c)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended to read as follows:

"(4)(A) The President shall select appropriate remedial actions determined to be necessary to carry out this section which, to the extent practicable, are in accordance with the national contingency plan and which provide for cost-effec-

tive response. In evaluating the cost-effectiveness of proposed alternative remedial actions, the President shall take into account the total short- and long-term costs of such actions, including the costs of operation and maintenance for the entire period during which such activities will be required.

"(B) Remedial actions in which treatment which significantly reduces the volume, toxicity or mobility of the hazardous substances is a principal element, are to be preferred over remedial actions not involving such treatment. The offsite transport and disposal of hazardous substances or contaminated materials without such treatment should be the least favored alternative remedial action, where practicable treatment technologies are available.

"(C) Remedial actions selected under this paragraph or otherwise required or agreed to by the President under this Act shall attain a degree of cleanup of hazardous substances, pollutants and contaminants from the environment and of control of further release at a minimum which assures protection of human health and the environment. To the extent practicable, such remedial actions shall completely remove released hazardous substances, pollutants and contaminants from the environment.

"(D) No permit shall be required under subtitle C of the Solid Waste Disposal Act for the portion of any removal or

remedial action conducted pursuant to this Act entirely onsite: *Provided,* That any onsite treatment, storage, or disposal of hazardous substances, pollutants or contaminants shall comply with the requirements of subparagraph (C).

"(E) Subject to the requirements of this paragraph, the President, shall select the appropriate remedial action which provides a balance between the need for protection of public health and welfare and the environment at the facility under consideration, and the availability of amounts from the Fund to respond to other sites which present or may present a threat to public health or welfare or the environment, taking into consideration the relative immediacy of such threats.".

PERMANENT RELOCATION

SEC. 18. (a) Section 101(24) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting after the third sentence thereof the following: "The term also includes the costs of such permanent relocation where, due to the release of a hazardous substance, the resale of property is impracticable because of a substantial loss in value of such property or because of a substantial burden imposed on the property by the release or threat of release and where injuries or illnesses, including acute mental distress, can be attributed to continued residence. In the case of property constituting the principal residence of the claimant, resale is impracticable if the claimant would be unable to secure suitable replacement housing if the

property were sold. For purposes of this paragraph, a substantial loss is a decline in fair market value in excess of 20 percent and a substantial burden is one which would impose on the seller a legal obligation to compensate subsequent purchasers for losses or injuries resulting from exposure to the released hazardous substance, pollutant or contaminant.".

(b) Section 111(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by—

(1) deleting "and" at the end of paragraph (5);

(2) striking the period at the end of paragraph (6) and inserting in lieu thereof "; and"; and

(3) adding the following new paragraph:

"(7) the costs of such permanent relocation where, due to the release of a hazardous substance, the resale of property is impracticable because of a substantial loss in value of such property or because of a substantial burden imposed on the property by the release or threat of release and where injuries or illnesses, including acute mental distress, can be attributed to continued residence. In the case of property constituting the principal residence of the claimant, resale is impracticable if the claimant would be unable to secure suitable replacement housing if the property were sold. For purposes of this paragraph, a substantial loss is a

decline in fair market value in excess of 20 percent and a substantial burden is one which would impose on the seller a legal obligation to compensate subsequent purchasers for losses or injuries resulting from exposure to the released hazardous substance, pollutant or contaminant.".

FEDERAL CAUSE OF ACTION

SEC. 19. (a) Section 107(a)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking "and" at the end of subparagraph (B); by striking the period at the end of subparagraph (C) and inserting in lieu thereof "; and"; and by adding the following new subparagraph:

"(D) damages, as defined in section 101(6)(B), resulting from such a release.".

(b) Section 101(b) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting "(A)" after "damages for" and by adding at the end thereof the following: "and (B)(i) any medical expenses, rehabilitation costs, or burial expenses due to bodily injury; (ii) any loss of income or profits or impairment or loss of earning capacity due to bodily injury; (iii) any pain and suffering due to bodily injury; (iv) any economic loss and any injury to property, including diminution in value; and (v) whenever the court determines such award is appropriate in accordance with section 107(n), taking into account the pro-

portion of the injured class which would benefit from such award, punitive damages;".

(c) Section 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsections:

"(l) In any action for damages under subparagraph (D) of subsection (a), subject to rules 402 and 403 of the Federal Rules of Evidence, the following evidence relevant to the issue of causation of bodily injury shall be admissible:

"(1) increases in the incidence of injury or disease in the exposed population over that which is otherwise probable;

"(2) epidemiological studies;

"(3) animal studies;

"(4) short-term in-vitro studies;

"(5) tissue and toxicologic studies;

"(6) environmental monitoring data; and

"(7) Government health effects studies done for the purpose of developing standards or exposure limits.

"(m) The standard of liability for any person for damages under subparagraph (D) of subsection (a)(4) of this section shall be strict liability without limitation to the defenses specified in subsection (b) of this section.

"(n) For the purposes of subparagraph (D) of subsection (a), punitive damages may be awarded in the case of conduct

manifesting a conscious, flagrant indifference to the safety of those persons who might be harmed by a hazardous substance, pollutant, or contaminant and constituting an extreme departure from accepted practice.

"(o) In the case of damages under subparagraph (D) of subsection (a)(4), persons liable under paragraph (3) of such subsection shall be liable only with regard to damages resulting from harm caused by releases of hazardous substances, pollutants, or contaminants owned or possessed by such person.".

(d) Section 113 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsections:

"(e) Jurisdiction of the United States district courts over any action under subparagraph (D) of section 107(a)(4) of this title shall be concurrent with the jurisdiction of the courts of any State over such an action, and nothing in this section shall be construed to affect the jurisdiction of any State court with respect to any action under this title.

"(f) It is the policy of the Congress to encourage certification of class actions in actions under subparagraph (D) of section 107(a)(4) of this title involving common issues of fact or law. In furtherance of that policy, the Congress finds that the requirements of rule 23 of the Federal Rules of Civil Procedure are met in actions under such subparagraph aris-

ing from the same release and presenting common issues of fact or law and involving thirty or more potential claimants.

"(g) In any action under subparagraph (D) of section 107(a)(4) of this title, defendants may be added at the request of plaintiffs or defendants, without regard to the citizenship of parties. The United States shall make available to appropriate parties information in its possession which is material to the identification of other responsible parties who are potential defendants.".

VICTIM ASSISTANCE

SEC. 20. (a) Section 111(c) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking "and" at the end of paragraph (5); by striking the period at the end of paragraph (6) and inserting in lieu thereof "; and"; and by adding the following new paragraph:

"(7) the costs of grants, not to exceed a total of $20,000,000 per year to each of five States selected by the Administrator to establish and operate a program of assistance to individuals suffering injury resulting from exposure to the release of hazardous substances, pollutants, or contaminants, as authorized under subsection (m).".

(b) Section 111 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsection:

"(m)(1) The Administrator shall, upon application pursuant to procedures established by the Administrator, select by no later than July 1, 1985, five States to each establish and operate for not less than a five-year period a program of assistance to individuals suffering injury resulting from exposure to hazardous substances, pollutants, or contaminants. Each grant shall be in an amount of not less than $2,000,000 and not more than $12,000,000 for each of the fiscal years of 1986, 1987, 1988, 1989, 1990. States shall be selected in the sole discretion of the Administrator on the basis of the following criteria:

"(A) The experience of State and local governments in administering programs which deal with the regulation of toxic chemicals;

"(B) The existence of and experience with a statutory scheme of response and liability of breadth similar to that of this Act; and

"(C) The representative nature of the hazardous substance, pollutant or contaminant releases and exposures in terms of the identities and toxic characteristics of the substances found, the manner and degree of exposures, and the seriousness and duration of the diseases or illnesses caused.".

"(2) Programs funded pursuant to this section shall, at a minimum, provide for the following:

"(A) In the case of the population of any area or class of individuals in which a solvent responsible party who may be liable under section 107 is not paying compensation for claims or providing assistance, comparable to assistance under this subsection, or has not accepted liability for such claims or assistance, and where the State determines, based on available information (including that submitted by members of such population or class or developed under section 104(i)), that—

"(i) exposure to a hazardous substance in a release has caused injury, illness, or disease;

"(ii) the population or class has been exposed to a hazardous substance in a release and a peer-reviewed epidemiological or other health study demonstrates a positive correlation between such exposure and an adverse health effect in such population or class;

"(iii) the population or class has been exposed for more than one year to drinking water which is contaminated with a hazardous substance known to cause injury, illness, or disease in humans;

"(iv) the population or class has been exposed to a hazardous substance in a release and

there is evidence that members of the population or class have adverse health effects that enter remission when exposure is temporarily eliminated; or

"(v) members of the population or class have an injury, illness, or disease which is only associated with exposure to a particular hazardous substance (where such injury, illness, or disease cannot be attributed to exposure in the workplace),

such population or class shall be eligible for the assistance provided in subparagraph (B).

"(B) Subject to subparagraph (C), the State shall provide each member of an eligible population or class under paragraph (1) with the following assistance:

"(i) a group insurance policy providing burial benefits, where death is reasonably related to injury, illness, or disease associated with exposure to a hazardous substance in a release;

"(ii) a group medical benefits insurance policy providing the reasonable costs of all medical and surgical treatment and hospitalization, excluding treatment or hospitalization solely arising from accidental injury, routine pregnancy, and well baby care, and subject to an annual deducti-

ble of $500, with no copayment requirement or annual or lifetime limitation on expenditures; and

"(iii) a group disability insurance policy, for those members of the population or class currently employed or with a history of employment.

"(C) Such policies provided under subparagraph (B) shall be secondary to, and provide for nonduplication of benefits with, any other policy in favor of such individual. The benefits of such other policy shall be those determined to be in force as of the date the State initiates proceedings toward a determination under subparagraph (A).

"(D) Assistance under this subsection shall be provided on the condition that the costs thereof in connection with any individual pursuing a claim against a potentially responsible party shall be repaid to the Fund out of the proceeds of any award or settlement of such claims.".

TRANSPORTATION INCIDENT RESPONSE

SEC. 21. Section 306 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsection:

"(d) As expeditiously as practicable, the Secretary of Transportation shall develop and establish a centralized computer based system enabling law enforcement officers, fire and safety officers, and other appropriate officers of Federal,

State, and local government access while in the field and through remote communications equipment to information regarding the identity and nature of the appropriate means of response, the type of threat posed and other suitable information regarding any shipment regulated by the Hazardous Materials Transportation Act.".

STATE CREDIT AMENDMENT

SEC. 22. (a) Section 104(c)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by striking "The President shall grant the State a credit against the share" and all that follows down through the end of such section 104(c)(3) and inserting in lieu thereof the following: "In determining the portion of the costs referred to in this section which is required to be paid by a participating State, the President shall grant the State a credit for amounts expended or obligated by such State or by a political subdivision thereof after January 1, 1978, and before December 11, 1980, for any response action costs which are covered by section 111(a) (1) or (2) and which were incurred at a facility or release listed pursuant to section 105(8). Such credit shall have the effect of reducing the amount which the State would otherwise be required to pay in connection with assistance under this section.".

(b) Section 104(d)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new sentence: "For the

purposes of the last sentence of subsection (c)(3) of this section, the President may enter into a contract or cooperative agreement with a State under this paragraph under which such State will take response actions in connection with releases listed pursuant to section 105(8)(B), using non-Federal funds for such response actions, in advance of and without any obligation by the President of amounts from the Fund for such response actions.".

(2) Section 104(c)(3) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following sentence: "The President shall grant the State a credit against the share of costs for which it is reponsible under this paragraph for any reasonable, documented, direct out-of-pocket non-Federal funds expended or obligated by the State under a contract agreement under the last sentence of subsection (d)(1).".

INDEMNIFICATION OF CONTRACTING PARTIES

SEC. 23. Section 107(e) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by inserting a new paragraph (2) as follows and redesignating the following paragraph as (3):

"(2) The Administrator may, in contracting or arranging for response action to be undertaken under this Act, agree to hold harmless and indemnify a contracting party against claims, including expenses of litigation or settlement, by third persons for death, bodily injury or loss of or damage to prop-

erty arising out of performance of a cleanup agreement to the extent that such claim does not arise out of the negligence of the contracting party.".

EMERGENCY RESPONSE BY STATE AND LOCAL GOVERNMENTS

SEC. 24. Section 107(d) of the Comprehensive Environmental Response, Compensation, and Liability Act to 1980 is amended by inserting "(1)" after "(d) and adding the following new language:

"(2) No State or local government shall be liable under this title for damages as a result of nonnegligent actions taken in reponse to an emergency created by the release of a hazardous substance, pollutant, or contaminant generated by or from a facility owned by another person.".

USE OF FUND FOR HEALTH ASSESSMENTS, REGISTRIES OF EXPOSED INDIVIDUALS, AND DIAGNOSTIC SERVICES

SEC. 25. (a) Section 111(c)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended—

(1) by inserting "in accordance with subsection (n)," after "(4)"; and

(2) by striking "epidemiologic studies" and inserting in lieu thereof "epidemiologic and laboratory studies and health assessments".

(b) Section 111 of such Act is amended by adding at the end thereof the following new subsection:

"(n)(1) For fiscal year 1985, not less than $18,000,000 shall be used for the purpose of carrying out activities described in subsection (c)(4), including any such activities related to hazardous waste stored, treated, or disposed of at a facility having a permit under section 3005 of the Solid Waste Disposal Act.

"(2) The activities described in subsection (c)(4), including any such activities related to hazardous waste stored, treated or disposed of at a facility having a permit under section 3005 of the Solid Waste Disposal Act, shall be carried out by the Agency for Toxic Substances and Disease Registry established by section 104(i), either directly, or through grants to the State (or political subdivisions thereof) in the case of States (or political subdivisions) which the Administrator of such Agency determines are capable of carrying out such activities. Such activities shall include conducting health assessments, including those required under section 3005(j) of the Solid Waste Disposal Act.

"(3) In determining sites at which to conduct health assessments under this subsection, the Administrator of the Agency for Toxic Substances and Disease Registry shall give priority to those facilities or sites at which there is documented evidence of release of hazardous constituents, at which the potential risk to human health appears highest, and for which in the judgment of the Administrator of such Agency existing

health assessment data is inadequate to assess the potential risk to human health as provided in paragraph (5).

"(4) Any State or political subdivision carrying out an assessment shall report the results of the assessment to the Administrator of such Agency, and shall include recommendations with respect to further activities which need to be carried out under this subsection or section 104. The Administrator of such Agency shall include the same recommendations in a report on the results of any assessment carried out directly by the Agency, and shall issue periodic reports which include the results of all the assessments carried out under this paragraph. Such assessments or other activities shall be reported after appropriate peer review.

"(5) For the purposes of this subsection and subsection (c)(4), the term 'health assessments' shall include preliminary assessments of the potential risk to human health posed by individual sites and facilities subject to this subsection, based on such factors as the nature and extent of contamination, the existence of potential for pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified contaminants and any available recommended ex-

posure or tolerance limits for such contaminants, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The assessment shall include an evaluation of the risks to the potentially affected population from all sources of such contaminants, including known point or nonpoint sources other than the site or facility in question. A purpose of such preliminary assessments shall be to help determine whether full-scale health or epidemiological studies and medical evaluations of exposed populations shall be undertaken.

"(6) In any case in which a health assessment performed under this subsection (including one required by section 3005(j) of the Solid Waste Disposal Act) discloses the esposure of a population to the release of a hazardous substance, the costs of such health assessment may be recovered as a cost of response under section 107 of this Act from persons causing or contributing to such release of such hazardous substance or, in the case of multiple releases contributing to such exposure, to all such releases.".

(c) Section 3005 of the Solid Waste Disposal Act is amended by adding the following new subsection:

"(j) EXPOSURE INFORMATION AND HEALTH ASSESSMENTS.—(1) Beginning on the date nine months after the enactment of the Solid Waste Disposal Act Amendments of 1984, each completed application for a permit under subsec-

tion (c) for a landfill or surface impoundment shall be accompanied by information reasonably ascertainable by the owner or operator on the potential for the public to be exposed to hazardous wastes or hazardous constituents through releases related to the unit. At a minimum, such information must address—

"(A) reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

"(B) the potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under subparagraph (A); and

"(C) the potential magnitude and nature of the human exposure resulting from such releases.

The owner or operator of a landfill or surface impoundment for which a completed application for a permit under subsection (c) has been submitted prior to such date shall submit the information required by this paragraph to the Administrator (or the State, in the case of a State with an authorized program) no later than the date nine months after such date of enactment.

"(2) The Administrator (or the State, in the case of a State with an authorized program) shall make the information required by paragraph (1), together with other relevant

information, available to the Agency for Toxic Substances and Disease Registry established by section 104(i) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980. Whenever in the judgment of the Administrator of such Agency, the Administrator, or the State (in the case of a State with an authorized program), a landfill or a surface impoundment poses a substantial potential risk to human health, due to the existence of releases of hazardous constituents, the magnitude of contamination with hazardous constituents which may be the result of a release, or the magnitude of the population exposed to such release or contamination, the Administrator of the Agency for Toxic Substances and Disease Registry shall conduct a health assessment in connection with such facility in accordance with section 111(m) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and take other appropriate action with respect to such risks as authorized by section 104 (b) and (i) of such Act.

"(3) Any member of the public may submit evidence of releases of or exposure to hazardous constituents from such a facility, or as to the risks or health effects associated with such releases or exposure, to the Administrator of the Agency for Toxic Substances and Diseases Registry, the Administrator, or the State (in the case of a State with an authorized program).".

SECTION 104 ORDER AUTHORITY

SEC. 26. Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding the following new subsection:

"(j)(1) Where the President determines that one or more responsible parties will properly carry out a response action under subsections (a) or (b) of this section, the President may enter into a consent order with such party or parties for that purpose.

"(2) Any person who violates or fails or refuses to comply with any order under this subsection may, in an action brought in the appropriate United States District Court to enforce such order, be fined not more than $5,000 for each day in which such violation occurs or such failure to comply continues.".

INJUNCTIVE RELIEF

SEC. 27. Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 is amended by adding a new subsection as follows:

"(d)(1) Except as provided herein a person may commence a civil action on his own behalf—

"(A) against any person, including the United States and any other governmental instrumentality of agency, to the extent permitted by the eleventh amendment to the Constitution, and including any past or present generator, past or present transporter, or

past or present owner or operator who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any hazardous substance which may present an imminent and substantial endangerment to health or the environment; or

"(B) against the Administrator of the EPA or the Administrator of the Agency for Toxic Substances and Disease Registry where there is alleged a failure to perform any act or duty under this Act which is not discretionary.

"Any action under this subsection shall be brought in the district court for the district in which the alleged violation occurred or the alleged endangerment may occur, or in the District Court of the District of Columbia. The district court shall have jurisdiction, without regard to the amount in controversy or the citizenship of the parties, to restrain any person who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any hazardous substance, to order such person to take such other action as may be necessary, or to order the Administrator to perform the act or duty, as the case may be, and to apply any appropriate civil penalties.

"(2) ACTIONS PROHIBITED.—No action may be commenced under paragraph (1) of this subsection—

"(A) prior to one hundred and twenty days after the plaintiff has given notice of the endangerment (i) to the Administrator; (ii) to the State in which the alleged endangerment may occur; and (iii) to any alleged violator or any person alleged to have contributed or to be contributing to the past or present handling, storage, treatment, transportation, or disposal of any hazardous substance referred to; or

"(B) with respect to an action under paragraph (1)(A) of this subsection, if the Administrator or a State has commenced and is diligently prosecuting a civil or criminal action in a court of the United States or a State to require compliance or has settled such action to restrain or abate acts or conditions which may have contributed or are contributing to the activities which may present the endangerment: *Provided*, however, That in any such action in a court of the United States, any person may intervene as a matter of right when the applicant claims an interest relating to the subject of the action and he is so situated that the disposition of the action may, as a practical matter, impair or impede his ability to protect that interest, unless the Administrator or the State shows that the applicant's interest is adequately represented by existing parties. No action may be commenced under sub-

section (1)(A) by any person (other than a State or local government) with respect to the siting of a hazardous waste treatment, storage, or a disposal facility, nor to restrain or enjoin the issuance of a permit for such facility".

"(3) COSTS.—The court in issuing any final order in any action brought pursuant to this section, may award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing or substantially prevailing party, whenever the court determines such an award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure."

AMENDING AND EXTENDING THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (SUPERFUND)

MONDAY, JUNE 4, 1984

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Trenton, NJ.

The committee met, pursuant to notice, at 11 a.m., in the State House, Trenton, NJ, Hon. Robert T. Stafford (chairman of the committee) presiding.

Present: Senators Stafford and Lautenberg.

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. This hearing of the Committee on Environment and Public Works will please come to order.

As a preliminary, let me say to the witnesses who will be appearing before us that where you have prepared statements we will have them placed in the record in full, and in the interest of time it will be appreciated if witnesses would orally summarize their statements.

I understand that the first panel of witnesses have been asked to do so in 10 minutes. We would appreciate it if that can be done in that length of time.

This is, to my knowledge, the first hearing that the committee has conducted, away from Washington, on questions involving the Superfund. I'm very privileged to be here, and, to identify myself, my name if Stafford. I'm the senior Senator from the State of Vermont. Some people introduce me as a senior citizen from the State of Vermont, but that is a fact and I am chairman of the Committee on Environment and Public Works.

With me this morning is a man who, obviously needs no introduction, Senator Frank Lautenberg, who is a very valuable member of our committee and your Senator from New Jersey. It's at his request and invitation that we're holding this hearing in New Jersey. I personally appreciate his making the request for I believe the rest of the country has a great deal to learn from New Jersey.

It comes as no surprise to most of you that New Jersey has more sites on the Superfund priority list than any other State in the Union. This is not necessarily a happy fact, but it's also not one of

which you should be embarrassed, for if you lead the Nation in the number of toxic chemical sites you also will lead the Nation in the effort to clean them up. Today the vast majority of the other States are learning that they share New Jersey's problems and that they're learning from your experiences both good and bad. When we were drafting Superfund legislation 5 years ago the State to which we turned for advice was New Jersey. You were one of the first States to recognize the growing threats of toxic chemicals. You were one of the first States to enact a Superfund law. You were the first to undertake the awesome task of cleaning up hundreds of abandoned hazardous wastesites, and you have been the foremost State to proceed at its own rapid pace, a pace much faster than that set by the Federal Government.

Today we're in the process of extending the Superfund Law; and so we again look to New Jersey for help based on experience, sometime bitter experience. Five years ago that experience helped us draft a law which was a good first step. This year I hope you can help us draft a newer, tougher, expanded, and more effective law. We hope that this new law can provide some assistance for victims of toxic chemicals as well as some badly-needed protection for ground water. These are both areas where New Jersey and people have learned some lessons. And I look forward to hearing from them.

At this point, Senator Lautenberg, do you have an opening statement?

OPENING STATEMENT OF HON. FRANK R. LAUTENBERG, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator LAUTENBERG. Yes, thank you, Chairman Stafford.

Welcome to our State. Welcome to our capital. Your presence here is very meaningful and deeply appreciated not only by me, but by all of the citizens of New Jersey. We're pleased that after several days of flooding we were able to arrange such pleasant weather.

The Senator has had an opportunity to see some of the problem sites as we traveled through some of the prettiest parts of the State from the north. Senator Stafford has characterized our situation accurately. Toxic waste is the No. 1 environmental problem in New Jersey. Toxic waste is the No. 1 concern of our citizens. Polls show that over 75 percent of the public in New Jersey believes that there is a significant risk of cancer due to toxic wastes exposure. Studies at the University of Medicine and Dentistry in Newark suggest a strong association between New Jersey's high cancer death rates and proximity of cancer victims to hazardous dump sites. The public's fears appear to be grounded in fact.

What's at stake here are people. Over the next few weeks our committee will be drafting a bill to strengthen the Superfund program. Our witnesses today will address the key issues before the committee, questions like how big a fund, who pays, what are the realistic cleanup goals, how fast can we move, how can we compensate the victims. They will aslo address the issue of ground water contamination, a ticking time bomb associated with neglected hazardous wastesites. The facts are compelling.

Half of all the water supplies in the United States come from ground water. Sixty percent of New Jersey's water supplies and over 90 percent of the water used in South Jersey is from ground water supplies. Of the 900 sites studied under the Superfund program 526 had observed releases into ground water. Ground water contamination is possible at 82 of the 85 Superfund sites in New Jersey.

Among the major sources of this contamination in New Jersey have been hazardous wastesites and landfills, industrial lagoons, and leaking underground storage tanks. The chemicals involved are known to cause a range of very serious health problems. I hope our hearings today can assist the committee's efforts to identify changes in the Superfund program to prevent further ground water contamination and, most effectively, clean up affected water supplies. They should also sensitize us to what we can do to relieve the stress and financial hardship experienced by families dependent on contaminated water supplies, and communities now left with long-term maintenance costs that far exceed their ability to pay.

Our first panel, Mr. Chairman, represents communities which have suffered from exposure to contaminated water supplies associated with hazardous waste sites or with chemical releases. It's difficult, I know, for them to tell their stories today just as it was wrenching for the victims that appeared before our committee in Washington. Mr. Chairman, I know that you remember those witnesses from the State of Massachusetts. I very much appreciate their courage in carrying their messages, very personal stories, to the committee and the public; and I, again, thank you, Chairman Stafford, for visiting us in New Jersey to learn more about the problems as you view some of our assets at the same time.

Senator STAFFORD. Thank you very much, Senator Lautenberg.

We're now going to go to our first panel of witnesses. I understand they're to take the four seats adjacent to the table that Senator Lautenberg and I are occupying, and the panel will be Mr. Raymond Adams and Mr. Richard Keenan of Pomona, NJ, Mr. Jim McCarthy of Jackson, NJ, and Ms. Barbara Vecchiarelli of Morganville, NJ. We appreciate your being here and we will appreciate it if you can make your statements in about 10 minutes each if that's agreeable. And I apologize to you if I mispronounced your name.

Ms. VECCHIARELLI. You did not. Thank you very much.

Senator STAFFORD. I think we'll go in the order in which we've listed your names, if that's agreeable to you. That would mean Mr. Adams to be followed by Mr. Keenan. So, Mr. Adams, you're on.

STATEMENT OF RAYMOND ADAMS, POMONA, NJ

Mr. ADAMS. Thank you, sir. I will try to condense a 22-month nightmare into a few moments of your time. My name is Ray Adams, I'm from the small community of Pomona in Galloway Township, Atlantic County, NJ. I'm married and the father of four children: Karen, 16; Raymond, 12; Jimmy, 6; and Keith, 4. I give you their names because I want you to realize that they are human beings, not statistics on a piece of paper. I'm here to tell you the

horror story of how my family, friends, and neighbors have been living for the past 22 months.

In August of 1982 contaminated wellwater was discovered in our 200-home development called Pomona Oaks. Further testing revealed a large plume of contamination. A series of meetings were held between the township council. Atlantic County Health department, and the people of Pomona Oaks. In the course of these meetings we were told not to get hysterical, that we had a relatively small problem, an environmental problem and not a health problem in spite of the fact that the results of the testing on one property showed the following chemical: Toluene, 6,400 parts per billion; trans 1-2 dichlorethylene, 1,050 parts per billion; TEC, 670 parts per billion; dichlorbenzene, 550 parts per billion; and methylene chloride, 280 parts per billion.

Hysterical is not a strong enough work for our situation. We are living in a daily environment of ultra-hysteria. Try explaining to a 4- and 6-year-old child why they are not allowed to turn the spigot on to get water and try explaining to a 12- or 16-year-old that there is no money for certain activities because we have to pay $110 a month for drinking water and cooking. Try living with the thoughts every day of just not knowing.

Let me give you a few more examples: 241 Terry Lane, December 1982, 1,400 parts billion benzene, 35 parts per billion 111 dichlorethane; 243 Terry Lane, 160 parts per billion benzene; 244 Terry Lane, 180 parts per billion benzene.

There's a reason why I'm bringing out these benzene results. In a letter to my wife Diana dated April 28, 1983 from the Assistant Surgeon General of the United States, Dr. Foege, he states, and I quote, "The EPA standards for drinking water recommend a level of zero benzene because of the proven carcinogenicity of benzene."

After 18 months of living with our so-called environmental problem the State health department after numerous tests declared it a health hazard and advised us not to shower or bathe in our well water, also advising us that the only cure for the problem was a public water supply as soon as possible.

We, unlike other contaminated areas throughout the State, are blessed with the additional problem of not knowing the source of the contamination. We were told by the county health officer, Mr. Aiello, that the cost of locating the source would be astronomical and not within the budget. We are located in an area that is 1 mile from a Government installation, 4½ miles from the famous Price's Pit, 2 miles from a Lenox china plant, and 2 blocks from a shopping center that includes a gas station and used to have on the premises a dry cleaning plant. Armed with this information, I look back over the last 22 months, and even though we are not drinking or cooking with the water we have been bathing our children in it and have to continue to do so because we are an average American family trying to make ends meet and cannot afford to close our homes and move elsewhere.

Allow me at this time to show you with the help of this chart why we continue to have to be a group of frustrated taxpaying homeowners. Allow me to make you honorary members of the Pomona Oaks development, which is in the circle. A list of chemicals found in these homes. The red circle I will get to in a moment.

We started out with the Atlantic County Health Department, Joe Aiello; then to the Galloway Township Council Mayor, John Mooney; New Jersey State Health Department, Dr. Rosenman; Atlantic County Freeholder, Kirk Conover; Atlantic County Freeholder, Dir: John Gaffney; Atlantic County Executive, Richard Squires; State Senator, William Gormley; New Jersey DEP Commissioner, Bob Hughey; Superfund EPA, Fred Rubell; Spill Fund, 5 percent rehab money.

Now, getting back to the red circle. That red circle indicates red tape. We have yet with any of these agencies been able to break that circle of red tape. As you can see, it is hard for us to understand that in these United States of America after nearly 2 years of testing and analyzing we are still living in a cancer-causing environment.

In closing let me add that this is just a story of one small community in a State where there are many such communites. I have come before you today not as Ray Adams, a single concerned citizens, or Ray Adams, co-chairman of the Pomona Oaks Action Group, but also a member of the Citizens Action Group for Clean Water, and member of Citizens Clearing House for Clean Water. We are becoming a group of organized citizens who will do whatever is necessary to educate the people of New Jersey and have them join us in our fight to clean up "Cancer Alley" and make this State once again the Garden State.

I ask you to please consider very seriously the reauthorizaton of the Superfund and include in the Superfund some type of victim compensation and mandatory time schedules for solving problems such as there.

Thank you for the opportunity for letting me speak.

Senator STAFFORD. Thank you very much, Mr. Adams.

Mr. Keenan, I don't know whether you wish to make a statement or not, but we'd be glad to hear it if you do.

Mr. KEENAN. My co-chairman speaks on behalf of the Pomona Oaks Committee, which will suffice.

Senator STAFFORD. All right, sir. Then we will go to Jim McCarthy.

STATEMENT OF JAMES McCARTHY, JACKSON TOWNSHIP, NJ

Mr. MCCARTHY. Mr. Chairman, thank you, Senator Lautenberg. My name is James McCarthy. My family is but one of the victims of the atrocities of a toxic waste dump, Allegro landfill in Jackson Township, NJ, I would like to address the Senate committee today to implore you to continue the Superfund law and make it stronger to protect the innocent victims of toxic waste.

I appear before this committee as an expert witness on the subject of toxic waste dump sites. My expertise is not in the field of chemistry, nor in the field of geology or hydrology. My expertise is in the field of death and human suffering due to exposure to improperly-disposed toxic waste. Federal, State, and local government through lack of responsive action and regulation of the chemical industry have made me an expert in the field.

What started out as a naive money-making venture to operate a municipal sanitary landfill in Jackson Township concluded 13

years later with a guilty verdict against Jackson Township for knowingly running an illegal toxic waste dump site. The $17 million judgment awarded last November to 97 Allegro area families is the largest judgment ever recovered against a governmental agency in a toxic dump waste site trail. The verdict came in the wake of years of kidney diseases, respiratory ailments, miscarriages, deaths of innocent children and adults, all the pain and suffering with ordinary household drinking water which unbeknownst to the residents contained a witch's brew of toxic chemicals, which had seeped from the Jackson Township landfill. Some 38 different chemicals include acetone, benzene, trichlorethylene, tetrochlorethane, and chloroform found their way into our shallow wells.

On a 1,000 stretch of my block alone the toxic scoreboard reads as follows: two people with kidneys surgically removed, one resident currently on a dialysis machine, four more residents currently undergoing medical care for kidney problems, my own daughter's death due to a rare form of kidney cancer, and the latest tragic incident occurred on December 5 when my 38-year old neighbor and mother of two children succumbed to massive kidney failure after two previous kidney transplants. There were also two additional infant deaths within the neighborhood with five or more known kidney problems. All of this in addition to the fear of the unknown and the everyday degrading experience of having to beg uncaring government officials for potable water.

For 2 years we were delivered a daily ration of 30 gallons of water in lead-painted Civil Defense surplus containers. Incidents of frozen cans, direct, leaves, cigarette butts, slivers of metal, and even urine in the so-called potable water deliveries were not uncommon. Parents wre forced to watch oozing sores develop on their children and themselves and no clean water was supplied for bathing purposes.

My family's personal medical problem began in 1974 with my son who experienced open pustual sores over most of his body and a serious respiratory ailment. In 1975 my 9-month old daughter Tara died after 31 days in a pediatric intensive care unit following two operations. The diagnosis was a rare form of kidney cancer. At the same time, my son Trevor was brought to the hospital to be tested for leukemia. My own kidney atrophy had to be surgically removed in 1977. The same year my infant daughter Dana also experienced serious kidney problems. My children's pet dog had to be put to sleep in 1980 and an autopsy revealed that she had kidney cancer.

Senators, my family has paid their dues, medically, financially, and emotionally due to the uncontrolled greed of the chemical industry and the dismal failure of the Government to protect the health, safety, and welfare of its citizens of the disasterous Allegro landfill with no immediate action to date. The reason no work has begun is the reason we need Superfund money. The Superfund at the present level is far too small to fund the currently-known number of sites requiring remedial action. An EPA Superfund Task Force report released earlier this year estimates as much as $16 billion may be required to do the job.

The New Jersey Department of Environmental Protection has probably the most aggressive long-range clean-up plan in the Nation. The New Jersey DEP must be able to rely on the ability of

the Federal Government to have adequate funding available to clean up the 85 New Jersey sites on the national priority list. The Superfund should be a permanent law and not subject to political or industrial influenced panels as we see it presently. New Jersey and other States should be reimbursed for any State revenues used to clean up the State and should not be penalized financially for their broad aggressive clean-up actions as is the current case. There must be a more direct response to the need to address the sites and take immediate remedial action when necessary. More authority should be delegated to the States to accomplish these goals. Uniform guidelines among Federal State agencies working on these sites should be established.

Most important of all, victims of the compensation plan must be included in any bill that causes to become law. When ordinary citizens are exposed to toxic waste dump sites they are forced to take legal action, too often legal action is not economically feasible. What citizen or group of citizens can match the pocketbooks of Dow, Monsanto, Allied Chemical, and thousands of other large chemical firms who are the forefathers of our advanced technological society? Even worse, what individual citizen can match the bottomless legal purses of the insurance that protects these chemical giants and who will stop at nothing to show a profit without regard for right or wrong. We must renew and strengthen the Superfund to take advantage of the health registry for immediate medical treatment and future medical surveillance of these innocent third-party victims.

In the past 4 years the EPA has used its part of the Superfund Law only once. Senator, we must bring society's morals up-to-date with its full chemical technology. Thank you.

Senator STAFFORD. Thank you very much, Mr. McCarthy.

The committee will be pleased to hear from Ms. Barbara Vecchiarelli who will be the last witness for this panel. We would urge all members of the panel to stand by for possible questions.

STATEMENT OF BARBARA VECCHIARELLI, COUNCILWOMAN, MARLBORO TOWNSHIP, NJ

Ms. VECCHIARELLI. Chairman Stafford, Senator Lautenberg, my name is Barbara Vecchiarelli, I am a councilwoman in Marlboro Township. I am a member of the Burnt Fly Bog Advisory Committee, a task force created to monitor the cleanup of a deadly hazardous waste site in our community. I am also part of the New Jersey campaign against toxic hazards, a statewide coalition of community, labor, and environmental groups working to reduce human exposure to toxic hazards; but, most importantly, I come here today as a concerned citizen, concerned because my life and the lives of other members of my community have been affected dramatically by the toxic waste dump in our community. I'm concerned because I know that there are thousands of citizens just like me, innocent, normal, everyday people all over New Jersey and all over this country who have had to live through the nightmare of a toxic dump in their community.

I greatly appreciate the opportunity to testify today before the Senate Environmental Public Works Committee on a matter which

is the No. 1 concern to our citizens of New Jersey. The cleanup of our State's toxic waste problems and the need to be authorized to strengthen the Federal Superfund this year.

To begin with, I would like to share my personal experience of living near the Burnt Fly Bog and talk a bit about the human impact of our Nation's toxic waste crisis. Five years ago when I learned that I was living less than 1 mile from a deadly toxic waste dump filled with cancer-causing chemicals my life changed drastically. It has never been the same since and probably never will be.

The history of the Burnt Fly Bog dates back at least to the 1950's. The dump contains at least 15 years' worth of liquid industrial waste including PCB's, lead, arsenic, cyanides, chromium, benezene, and other volatile organic chemicals. Many of these chemicals are known to cause cancer, birth defects, or genetic mutations.

Burnt Fly Bog is located directly above the Englishtown sand aquifer. This aquifer is the major source of drinking water for 22 New Jersey townships and cities. The ground water is especially vulnerable to contamination because of its proximity to ground level.

Dumping at the bog was halted back in 1966 when a group of citizens brought litigation against the operators and had the dump closed down because of the obvious threat to the community's health. Today 18 years after the site was closed cleanup has yet to begin.

My involvement with the Burnt Fly Bog began back in 1980 as Congressman Florio and you, Senator Stafford, were pushing through the original Superfund Law. At the time the Environmental Protection Agency under President Carter allocated about $300,000 for a feasibility study to assess the damage at the bog and plan for the cleanup. However, when President Reagan came into office his administrative EPA immediately froze the money. It was only after intense pressure from the citizens of Marlboro and a few members of the New Jersey Congressional Delegation that Reagan's EPA freed up the money more than a year later. Because of political game-playing by the Reagan-Gorsuch EPA the correction of a major public health hazard was delayed for over a year. Of course, we learned shortly thereafter we were not the only victims of the mismanagement and political abuses of the Superfund program under the Reagan-Gorsuch EPA.

Just recently we learned that EPA has finally decided to allocate $1.8 million for the surface clean-up of one of the four lagoons at the bog. This, too, only happened as a result of constant pressure on EPA. Still, not one barrel has been removed from the site and not 1 ounce of sludge or liquid waste has been removed from the lagoons at Burnt Fly Bog.

I should point out that the bog is supposed to be one of the most dangerous toxic waste sites in the entire country ranked No. 8 on the Superfund national priority list. If so little action has occurred at the eighth worse site in the country, how can we expect to clean up the other 546 Superfund sites let alone the other 20,000 hazardous sites we know that are out there? I ask you can we afford not to reauthorize and strengthen the Superfund this year and get it to work properly?

Burnt Fly Bog has a severe impact on individual lives in Marlboro Township. The threat to human health is obvious. People have complained of skin rashes, miscarriages, and other diseases. One woman who lives a few hundred yards from the bog had to move her daughter and grandchild to another part of the State because she feared for their safety. She owns a horse farm and has several problems with her animals. For example, a foal was born blind, goats had cartilage problems, and her cat died of leukemia.

Let me just point out one very important thing. All of us are victims of toxic waste sites. If we all have to wait till we all become victims, it's too late. Some of us had more things happen to them that can never be replaced in our lives, and I don't think we should wait for that point to happen before we get to this problem. We don't know for sure that these problems are caused by toxic chemicals in the bog, but it is extremely difficult to calculate the effects these wastes have on human life; but we also don't know how many future cancers, birth defects, and deaths will occur as a result of the bog.

Finally, nobody knows the anxiety and fear we go through living every day of our lives with this problem. Not a day goes by that I don't think about the bog and the threat it poses. Everytime a member of my family and friends get sick I just can't help but think that it's the beginning of something dreadful. Thank God nothing devastating has happened to us yet, but who knows 20 years from now what it's going to be attributed to?

Getting involved with this problem has also provided quite a personal education for me. I have met many wonderful people who care about cleaning up this mess; and I have learned that if we citizens work together, we can eventually get our Government to do the right thing. Unfortunately, I have also learned that our governmental agencies which are mandated to protect the environment and safeguard the public's health, especially the EPA, seem more interested in protecting the polluters than in protecting the people. And I have learned that the only way to get our Government to act is to put constant pressure on them. Unfortunately, it is our anxiety and our anger that keeps us going, but sometimes I wonder. Should citizens have to go through such aggravation, anxiety, and personal pain and suffering just to get our Government to do their job?

Now, some people think that the limited progress that we have achieved with the Burnt Fly Bog cleanup is a success story and maybe it is compared to the minimal action which other communities have received; but if this were the measure of success used by our space program, we would still be struggling to get the first rocket off the ground.

I am not alone in my frustrations with the EPA and their mismanagement of Superfund. People all over New Jersey and all over the country are frustrated with the Reagan EPA, frustrated with its lack of action, its lack of information, the endless delays, and with its lack of concern for the health and safety of citizens. It is obvious that the present Superfund is not working and the Reagan administration does not seem very interested in making it work better.

Two years ago in a meeting with former EPA Administrator, Ann Gorsuch, I had the opportunity to ask her three simple questions. One, if a hazardous wastesite is on the Superfund list, is there any guarantee that the cleanup of the site will be funded? Two, if money is allocated for feasibility study and it is determined that remedial action is needed, is there any guarantee that money will be obligated for the actual cleanup? Three, is there any timeframe within which a Superfund site will receive remedial action? Her answers to all these questions were "No." No wonder there is such widespread lack of public confidence in the ability of our Government to manage toxic substances.

We had had some hope that the resignation of Miss Gorsuch Burford and the takeover of EPA by Ruckelshaus would bring with it a change in policy. However, the change would be more of a change in style and tone than one of substance.

For example, a few weeks ago I had the opportunity to hear the current EPA Chief of the Superfund Program speak at a conference in Philadelphia. He stated that the main reason the Superfund was not working was because of hysteria among citizens over the toxic waste problem. I told them that I did not think people were hysterical, but the fact that they were gaining in awareness of a critical problem.

That night I decided to look up the meanings of the two words, "hysterical" and "awareness." I would like to read these definitions for you. Hysteria is a mental illness in which a person may become highly excited or extremely anxious and seems to be blind, deaf, paralyzed, et cetera, without anything being physically wrong in the body.

Awareness is having knowledge of something as a result of paying close attention to what occurs around one.

I think the American public is becoming aware and maybe it is the EPA officials who are the ones hysterical.

The administration and Reagan's EPA, the seemingly lack of interest in cleaning up our toxic waste problem is the fact that the administration is opposed to reauthorizing and strengthening the Superfund this year. The big questions are why isn't Superfund working and how can we strengthen it to make sure it begins to do that job.

What are the problems of Superfund? I have just a few points. One, the pace of cleanup is far too slow. Of the 546 sites on the Superfund list only 6 have been cleaned up to this date in 3½ years and not 1 site in New Jersey. At present funding levels at the present rate of cleanup it will take close to 100 years just to clean up today's known sites. Two, the size of the fund is inadequate. EPA itself estimates that the current $1.6 billion fund could at most clean up only 170 sites and that the cleanup of 2,200 sites would require $15 billion. The Office of Technology Assessment has estimated that it will cost $40 billion to clean up just the Nation's worst sites. The cleanups are band-aid jobs rather than permanent clean up. EPA has stressed cost savings rather than long-term protection of the public health in its cleanup plans. In most cases EPA has recommended containment rather than permanent solutions such as detoxification or destruction.

For example, the EPA has proposed a surface cleanup for lagoon 1 at the Burnt Fly Bog. What does it mean and will it be enough to protect the environment and public health? I do not want to be back here 10 years from now asking for further assistance because the cleanup was not done right the first time.

Three, citizens are left out of the process. In most cases adequate information is not provided to citizens in a timely fashion. Moreover, the citizens are generally excluded from negotiations between Government and industry which takes place behind closed doors.

Four, EPA has failed to go after the polluters. Enforcement has been weak and the recovery of funds from the responsible party has been grossly inadequate.

The following changes are needed to strengthen Superfund. The fund must be expanded. At least $15 billion should be collected by the fund during the next 5 years. The fund should be permanent. Establishment of a permanent fund would demonstrate the strong national commitment needed to solve this massive problem. Superfund should include a mandatory schedule for feasibility studies and cleanups to ensure that EPA speeds up the rate of cleanups. Cleanups should be permanent. EPA should be required to utilize detoxification or destruction as the preferred cleanup approaches rather than containment.

Senator STAFFORD. Are you nearly through? Can you summarize the rest?

Ms. VECCHIARELLI. Yes. I'm sorry.

Senator STAFFORD. All right.

Ms. VECCHIARELLI. One more page and I'm done. I'm sorry, but I feel this is important.

EPA should set standards for cleanups and victims of exposure to hazardous waste and substances should be fairly compensated; and the rights of citizens to participate in decisions concerning the cleanup process should be increased.

Finally, I would like to stress once again how important it is that we reauthorize Superfund this year. We know the program is not working. We know why it's not working and we know how to fix it. Let's make the changes now so that EPA can gear up for the next several years and really do the job. It looks like Congressman Florio's Superfund bill H.R. 5640 has excellent prospects of being passed by the House this summer. We have counted on you and the other members of the Senate Environmental Public Works Committee to lead the ballot for a strong bill in the Senate this year. I want to thank you for your leadership on this important issue, and I want to thank you for coming here to New Jersey to listen to what the people of our State have to say about Superfund.

I also want to let you know we appreciate the fact that you have let the citizens speak first. We are the ones who have to suffer the consequences of the decades of illegal dumping by the industries and the mismanagement of Government. I am convinced, however, that if we can just remind EPA and the President that the role of Government is to protect the environment and the health and safety of the American public, not to protect the polluters, we can turn the Superfund Program around and get on with the job of cleaning up and preventing toxic pollution.

To conclude I have something I'd like to present to the chemical industry, and I do not know whether they're sitting here at the moment and I give it to you and I would appreciate it if you can give it to them.

Senator LAUTENBERG. While Barbara's getting this ready, I would ask, please, for the spectators not to demonstrate in any way. Senator Stafford is here on a very short schedule. He's very interested in the problems we have in New Jersey as shown by his presence here. We want him to feel welcome. He wants to get this job done. If we move along we'll get to hear everybody.

Ms. VECCHIARELLI. New Jersey DEP Commissioner has stated that it will probably cost at least $2 billion to clean up the 1,000 or so hazardous waste sites in the State. On behalf of the citizens of New Jersey here is an invoice for $2 billion to be paid by the chemical companies who are responsible for a large part of New Jersey's toxic waste problems. We are counting on Congress to make sure that the bill is paid. Let's reauthorize and strengthen the Superfund this year and get on with the cleanup job so we are able to leave our children and grandchildren with a safe and health environment to live in. Thank you very much.

Senator STAFFORD. Thank you all very much. Barbara, you better not leave. We might have some questions.

Ms. VECCHIARELLI. I don't know if I can do it.

Senator STAFFORD. We really appreciate the testimony you have all given to us. I think you all have underscored the urgency of extending and expanding the Superfund, as I indicated in the opening statement I made. However, let me give you one hard choice for a brief answer, please, because Senator Lautenberg has said we don't want to use up so much time that now we are not fair to witnesses who are going to follow later today.

If you have this hard choice to make, a single significant improvement or change in Superfund from the present law, what would that most urgent change be, in your opinion?

Barbara, you want to answer first?

Ms. VECCHIARELLI. First of all, to make the fund permanent and to get EPA off their rear ends to enforce all the guidelines and everything that's there to protect the people of the State of New Jersey. They're just not moving fast enough on it, and I think it's extremely important to do that.

Senator STAFFORD. All right. You managed to get two points in there in the first instance.

How about you, Mr. McCarthy?

Mr. MCCARTHY. Well, if I only had one choice, my personal choice would be victims' comp, but I would give right-of-way to that to make sure we had a fund that is adequate to clean up the sites that we know about now.

Senator STAFFORD. All right. How about you, sir?

Mr. ADAMS. I would just like to say that I would like to just get on with the job so I am not back here in 2 years in Mr. McCarthy's position telling you about one of my children that died.

Senator STAFFORD. All right. Mr. Keenan, do yo have anything to add to what the others on the panel have said?

Mr. KEENAN. I can only reiterate what the other panel members said. I think basically we all speak the same language. What was said is well taken and I think basically I will just reiterate that.

Senator STAFFORD. Thank you all. As far as I'm concerned, I'll take your message back to the rest of the committee in Washington.

Senator Lautenberg may have a question.

Senator LAUTENBERG. I have a few things that I'd like to ask you about. Now, what is your time like? Are you available for a few more minutes? Senator Bradley is here. We want to hear his testimony, and Congressman Florio will testify after him. We will have to move along since Senator Stafford has to get back to Washington. Can I ask you to stand by and we'll talk to you a few minutes later? Thank you very much for the excellent testimony. Each one of you made a very compelling argument.

Senator STAFFORD. The next witnesses will be two very distinguished colleagues of ours from Washington, and I understand they have opted to appear together. Senator Bradley who's done service on environmental and educational issues in Washington and Congressman Florio without whom we would not now have a Superfund law on which to build. He was the leader in the U.S. House when we were constructing Superfund 4 years ago. So, we're very happy you're both here and, Senator Bradley, we'd be more than pleased to hear from you.

STATEMENT OF HON. BILL BRADLEY, U.S. SENATOR FROM THE STATE OF NEW JERSEY

Senator BRADLEY. Thank you very much, Mr. Chairman, and Senator Lautenberg, for the opportunity to testify before the committee today on this very important matter, the reauthorization of Superfund. I can remember back in 1980 when the bill passed the House under Jim Florio's leadership and it was languishing in the Senate; and at that time Senator Stafford and I and a number of other Senators persevered and sat through many long hours of negotiations, and we did, indeed, get a Superfund bill passed. You and the committee, I think, are to be commended for pushing the reauthorization process along. I urge you to see it through the final passage this year and I pledge my wholehearted support and my enthusiasm. We simply can't afford to wait. Superfund must be reauthorized this year.

The record of EPA from 1980 to 1982 in my view was a national disgrace. For more than 2 years virtually nothing was done to confront the urgent problems of abandoned toxic waste dumps. It's taken more than 3 years, but the Superfund Program is finally beginning to show results. In New Jersey alone 16 sites are now slated for actual cleanup. In 1985 18 more sites will enter the design phase in fiscal year 1985 and another 21 sites will be the subject of feasibility studies next year. That's 63 sites out of a total of 85 Superfund sites in our State in some stage of the cleanup process. Other States have similar plans.

For those ambitious work schedules to be accomplished, the Federal Government must keep its end of the bargain. By this September Federal funds must be available or the 1985 work schedule in

New Jersey and other States cannot proceed. Uncertainty about the Superfund's continued existence will, obviously, slow the process and delay construction design and feasibility studies. That is why we must reauthorize Superfund this year. The Federal Government has moved too slowly and has gotten bogged down in nitpicking debates between different levels of government instead of digging in and getting the job done.

I recall in 1980 we made a promise to the American people. We promised that the hazardous waste sites that pollute their air and water and threaten their lives and the lives of their children would be eliminated. We're only now beginning to make good on that promise. We have to maintain the momentum. We have to eliminate those toxic waste dumps that continue to poison our country. The logner these abandoned waste sites are allowed to remain, the more people will be exposed to the threats of cancer and other health threats. We must clean up these sites now.

Now, we also know that the magnitude of the hazardous waste problem is even larger than we had earlier feared. Senator Lautenberg and I, and Senator Stafford who was a cosponsor, introduced a reauthorization bill over a year ago. Since then EPA has attempted to quantify the size of the job remaining. And they now conservatively estimate that the tax will require between $8 and $16 billion. We have to raise at least that amount, which is several times larger than the initial $1.6 billion Superfund.

I might also say that any reauthorization should also speed up the cleanup process. First, it should provide clear guidance to EPA regarding priority of activities. Cleanup toxic waste dump sites first; negotiate second.

At one of the Nation's worse dump sites, the Lipari landfill in Gloucester County, negotiations between EPA and the main waste generators delayed the cleanup for 2 years. Cleanup work began only last year when EPA finally decided to use the Superfund for the cleanup.

Second, the bill should remove EPA's built-in bias toward low capital costs cleanup operations. I believe the 1980 law is clear about cost sharing of operations and maintenance costs. EPA, however, has interpreted it to require States to pay 100 percent of the operation and maintenance costs. This interpretation has created a built-in bias on the part of the EPA toward low upfront cost operations while political and fiscal pressures tilt the States in the opposite direction. This has led to delays in reaching EPA and State agreements. A classic example of that is right here in New Jersey, Price's Pit in Atlantic County.

In most sites there are two general approaches to cleaning up the site, excavation, or containment. Excavation, actually digging up the waste and removing it from the areas, entails high upfront capital costs and low operations and maintenance costs. Containment, on the other hand, entails low upfront capital costs but high and variable operations and maintenance costs since elaborate monitoring is required.

For example, the capital cost of the excavation option at Price's Pit could run from $50 to $100 million, but since the waste would be entirely removed there would be no long-term operations and maintenance for the State to pay for it. On the other hand, the cap-

ital cost of containing the pollution onsite at Price's Pit would be only $5 to $13 million, but the operations and maintenance cost over a 20- to 30-year period would be from $30 to $50 million; but the State of New Jersey under current interpretation would have to pay all of it. So, is it any small wonder that the State and Federal environmental agencies have been arguing about which approach to take?

EPA says the State should pay all O&M costs while EPA will pay 90 percent of capital costs. And while they argue the plume of toxic waste is moving closer and closer to Atlantic City's water supply. So, I might say, Mr. Chairman, once again, another bill that Senator Lautenberg and I introduced in the Senate last year would realign the Federal and State incentives by making both capital costs and operations and maintenance costs subject to the same 90/10 cost-sharing formula. The decisions would more likely be made then I think on public health, cost effectiveness calculations, rather than on the basis of who pays for what.

The third recommendation I would offer is that section 104C of the Superfund law be clearly reauthorized. It would allow the EPA to give States credit for State expenditures at approved Superfund sites. This State credit provision would enable States to pay for site cleanup with their funds and then receive credits for these expenditures as Superfund money becomes available after reauthorization. This will allow us to maintain the cleanup momentum while we wait for additional funds to be earmarked for the Superfund. I don't think we want to let design and feasibility studies die out.

The State of New Jersey I understand is prepared to spend $100 million of its own funds to start the cleanup process at the most severe sites, but to make this commitment the State government says it needs reassurance that it will be reimbursed for the work that is done. We should encourage States like New Jersey not to sit on their hands and their drums of toxic wastes until EPA gets around to doing something, but to act with assurance of reimbursement.

So, in summary, Mr. Chairman, I offer several suggestions. First, that we reauthorize Superfund at much more than the initial $1.6 billion figure; second, that we clean up toxic waste dumps first and then negotiate with private owners second about what share they're going to pay; third, that we have 90/10 split for both capital costs and operations and maintenance cost; and, fourth, that we have Federal reimbursement for moneys spent by State operations to clean up toxic wastes.

And I might finally say that I think if we can get some form of victim's compensation that that would be also a very important provision. In my view there's no more central role for government than to protect the public health and safety of its citizens. During the past several years I think the Federal Government has had an abysmal record on the cleanup of hazardous waste. I believe the Administrator of EPA wants to improve on that record, but good intentions are not enough. There are legislative steps that must be taken now to ensure the intent of Congress to get the toxic waste and the time bombs disarmed and to have it done now.

I stand ready to work with the committee as I did in 1980 and hope that we will have a success as we did then in getting the Superfund reauthorized.

Senator STAFFORD. Thank you very much, Senator Bradley.

Congressman Florio, we're very happy you're here and we're prepared to hear from you.

Senator LAUTENBERG. Usually I have to say welcome to my New Jersey colleagues. Today I don't have to say that. Welcome to New Jersey, Senator Stafford.

STATEMENT OF HON. JAMES J. FLORIO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Congressman FLORIO. Thank you very much. Mr. Chairman, Senator Lautenberg and staff, I'm very pleased to be able to take part in these hearings in New Jersey. The appropriateness of having these hearings in New Jersey I think is too obvious to have to even comment on it. Unfortunately, we have been the recipient of much of the problem; and, therefore, we in New Jersey have a vested interest in seeing a strong environmental program put into effect, particularly that component of the environmental program dealing with Superfund. I would ask that my entire statement be put into the record.

Senator LAUTENBERG. It will. It will as if read.

Congressman FLORIO. And in the interest of conserving the committee's time I'd like to touch on some of the key important points. I think many of you know when I introduced the legislation it incorporates many of the points that Senator Bradley talked about and that bill has, in fact, been passed by my subcommittee and the schedule for consideration by the full Energy Commerce Committee next week. A very important development has been the Speaker of the House, Mr. O'Neill, has made the commitment that this bill will be dealt with within the first 2 weeks of August on the House floor so, therefore, we think we're on track to allow us to be in a position to have action taken, completed, and forwarded to the President this year, which is extremely important. I know that there are some who say we should wait after the election, wait until next year. That really is not a wise course of action from any standpoint.

Funding authority for Superfund, as you know, expires next year. And the agency's record in the last 4 years has left something to be desired in terms of the ability to manage these funds in a sensible way. I'm sure that it's been made reference to this morning, but after 4 years of a 5-year program 6 sites have been cleaned up out of 22,000, none in New Jersey. So that we are faced with making correction, we are faced with expanding and extending the program, but also tightening up the program. There really wasn't anything wrong with the program to start with, but we worked from the assumption that people would take charge of the program and try to implement it. That has not been the case so we have to tighten up discretion, we have to spell out certain things that have to be achieved in order to ensure that the program's promise would be fulfilled.

Opponents, as I said, are saying we should wait until next year. For a number of reasons, I don't think that's desirable. The manager of any enterprise, large or small, Government or private, knows that a significant expansion of an ongoing project takes advanced planning. Under the bill that I've introduced the fund would go from $1.6 billion to $9 billion, which is a significant expansion. This almost six-fold increase will mean a dramatic revision of personnel, management, and long-term planning at EPA. We have to begin that readjustment process. We can't afford to wait until August or September of 1985 to give EPA notice of what it is they're going to have to do so that on the 1st of October 1985 when they must implement the new bill they'll have to do a very quick 180 degree turn. We need this full year to allow EPA to adjust to and prepare for implementation of the expanded resources that I'm hoping that we will give to them.

I'd like to focus today on the specific aspects of the bill that I've introduced which will offer basic and badly needed assistance to States such as New Jersey, which face substantial cleanup agendas. Unlike many other Federal environmental laws, Superfund has always been structured as a federally funded effort supported primarily by industry taxes, assessed at the national level with the States assuming only a relatively small percentage of cleanup costs.

The first thing my bill would do is to make this Federal promise to the States a meaningful reality by guaranteeing that we will have enough money in the Superfund to support the clean up effort primarily conducted in the State. As I indicated to you, we're going from $1.6 billion to $9 billion.

The second question most often expressed by the States is the inadequate and at times destructive management program by EPA. While they began with great hope concerning the promise of Federal funding, States like New Jersey and New York and Pennsylvania, all of which share major site problems, have been driven to the point of frustrated desperation by the Federal Government's erratic and painfully slow implementation of the laws and mandates. The bill we are considering in the House would address these concerns in two specific ways.

First, it would place EPA on a strict schedule for cleanup actions mandating, for example, that actual cleanup work begin at no fewer than 150 sites each year.

Second, the bill will give the agency clear direction concerning the cleanup standards which would apply at each site. Currently, EPA decides the critical question of how clean is clean on an ad hoc site-by-site basis. This confused and arbitrary decisionmaking has led many States to fear that the program is run on the principle of the squakiest but not necessarily the dirtiest wheel gets the grease. Bureaucratic aggressiveness and at times playing politics determines whether a site gets a Cadillac level or a used jalopy level of cleanup. It is clearly our responsibility to put an end to this confusion and establish uniform, mandatory national cleanup standards for the agencies and for the States to follow.

A third and very closely related concern which is often raised by the States is the important question of who is assuming responsibility for the maintenance of the sites. I'll not go into my testimony

because Senator Bradley touched on that point that in my bill we are following the recommendations and are shifting the cost of maintenance to the Superfund thereby relieving the States of a great financial burden. Just to put some flesh on the bones of the example that Senator Bradley used, the Price's Pit site. The long-term maintenance is estimated at a million dollars a year for 20 years. That's $20 million for the State to deal with as contrasted with the upfront projected costs of $12 million for the Federal Government so you can see in that one particular site $20 million would be expected from the State under the existing system. We would change that and change it very dramatically. The bill we're considering in the House now will resolve this problem by requiring the Federal to assume 90 percent of the responsibility for operation and maintenance. We are also repealing the provision of the current Superfund law that preempts State taking authority. That is solving the other problem of whether the States have the authority to raise money. We feel very strongly because there's never been any question about that, but some of the States have made the point that they are concerned about whether they can raise their own moneys and spend their own moneys.

In New Jersey the spill fund is not being used in a very effective way because of these alleged apprehensions. We will resolve that in this bill by, as I say, making it clear and equivocal there is no preemption in the current law.

I would just also say on another point Senator Bradley raised that the bill that I've introduced, which is now on its way to passage, will allow the States to apply the administrative costs of running their Superfund partnership programs to their 10 percent matching share. That is to say, the cleanup formula for the initial program as it's now contemplated as well as for the proposal is a 90 Federal share/10 percent State share. We would allow the administrative costs of the cleanup program at the State level to be credited to the 10-percent matching share.

Mr. Chairman, my last point would be in response to one of Mr. McCarthy's concerns regarding victims' compensation. The proposal that is working its way through the House right now has a clear national Federal cause of action provided for. That will go a long way to allowing citizens in a realistic way to obtain vindication in the courts. As you know, we included in the Superfund bill something called the 301E study. The study that was presided over by former Attorney General Zazzali here in New Jersey and we are very proud of the quality of the work that was provided. The conclusion of the study, as you know, is that the existing toxic tort judicial system in this Nation is unfair and that there has to be an effort to change that. Our bill provides that remedy. Likewise, we provide for emergency relief for citizens when the determination is made that a site that is being cleaned up is a health hazard to people, there is emergency relief capability. I regard that as minimal victims' compensation that we should contain or have contained in a bill.

I'm very pleased to be here and look forward to cooperating.

Senator STAFFORD. Thank you very much.

We're pressing forward later this month. In fact, the Environment and Public Works Committee will probably be drafting a bill

by next week, so we appreciate the recommendations and the statements and we'll try to work together between the House and Senate so that if there are differences, they will be small and we can speedily resolve them in conference and get the job done this year. I personally have no questions.

Do you?

Senator LAUTENBERG. No. If I might, Mr. Chairman, for just a moment, say to both my colleagues that their comments are welcome. Senator Bradley has had a long involvement with the Superfund and a deep interest. In my new capacity as a member of the Environment Committee, I look forward to working with Senator Bradley toward the same objectives—a strong and effective Superfund for New Jersey citizens. Senator Bradley has been very helpful in working with us on the Superfund Program. Congressman Florio has been a leader and very helpful as well. Both your statements here today were very important. We must get on with the job of cleaning up New Jersey's abandoned hazardous waste sites. New Jersey is a forward-looking State. Unfortunately, we have problems because of the density of our population. But we are a responsive State, and have made a strong commitment to environmental protection.

Congressman Florio, I endorse your bill. We will be working to develop a strong companion bill in the Senate. I am pleased that the citizens of New Jersey have heard first hand today that the chairman of our committee, Senator Stafford, shares our concerns, our goals, and our objectives. It's really wonderful to have his endorsement for the reauthorization of a stronger, tougher Superfund Program this year. It will make the task of reauthorization a lot easier. Senator Stafford has conducted, in my experience on the committee, a totally bipartisan consideration of legislation. He has shown tremendous concern about the citizens of our State and country, and has been as forthright as anyone in his commitment to reauthorize Superfund this year and at a higher funding level. Mr. Ruckelshaus, the Administrator of the Environmental Protection Agency, has testified before our committee that he, too, believes the funding ought to be at much higher levels, and he, too, would recommend that the President sign a reauthorized Superfund this year. I think that among committee members, there is marvelous uniformity, if not unanimity, of opinion that we have to address these environmental problems, whether it's Superfund, clean air, or clean water. We've got to get on with cleaning up our environment. That's what the citizens of this country are demanding. That is what the citizens of New Jersey are asking of us as their legislators, and we have a commitment to do the job; and I am pleased that we can work together to get this job done. It doesn't matter what committees we sit on or what bodies we represent, we're determined to get this legislation passed and give the citizens in our State and across the country a chance to breathe a little bit easier. Thank you very much.

Senator STAFFORD. Senator Bradley.

Senator BRADLEY. Let me stress my appreciation to you and to Senator Lautenberg for bringing the hearing to New Jersey and allowing our citizens to petition you directly. I am personally greatful for you to being so responsive.

Congressman FLORIO. I feel very much more confident that this committee was chaired by a Chair whose commitment to the environment is beyond question. I think that's important, and when you do go through this hands-on workout in the field, it's very reenforcing to the people of this country. Although in a sense there is a consensus, there is a consensus in the abstract, all those who sign on to this abstract commitment to reauthorizing Superfund are not as committed as I know the chairman is. This committee has the experience and is committed to dealing with specifics as opposed to abstractions, and I thank you very much for coming to New Jersey.

Senator STAFFORD. Thank you all very much. The committee is going to stand in recess until called back by Senator Lautenberg. At this point the committee is recessed.

Senator LAUTENBERG. If I may say while I still have the attention of the audience, we will be back here in about 15 minutes. Thank you very much, Chairman Stafford.

[After recess.]

Senator LAUTENBERG. Will everyone please come to order. Since we still have a fairly long list of witnesses to be heard we will get right to it.

I would like to ask State Senator Daniel Dalton to come to the table.

STATEMENT OF HON. DANIEL J. DALTON, STATE SENATOR, STATE OF NEW JERSEY

Senator DALTON. Thank you I am Senator Daniel Dalton, chairman of the Senate Energy and Environment Committee and vice-chairman of the National Conference of State Legislatures' Natural Resource and Environment Committee.

First I would like to thank Chairman Stafford and, of course, Senator Lautenberg for bringing this hearing to New Jersey and focusing some attention on the formidable problems we in this State are having with hazardous waste cleanup and disposal and their increasingly severe impact on ground water contamination. As the State which has the dubious distinction of leading the Nation in sites on the national priority list, I assure you that that attention is not misplaced.

As you may know, I have maintained an interest in the Superfund Program throughout its history, not only because I think it necessary to maintain continuity of Federal and State site cleanup efforts, but because it must be architected so as to permit the State's own efforts to be as efficient and effective as possible. In testifying on behalf of the NCSL and the State of New Jersey on CERCLA this past February on Congressman Florio's bill H.R. 4813, I affirmed the need for continuation and expansion of Superfund, supported increased Federal participation in the costs of long-term operation and maintenance, asked for clarification that States are responsible for 50 percent of the cleanup costs only at sites publicly owned and operated, recommended a credit for cleanup expenditures incurred prior to enactment of CERCLA, requested consultation by the Administrator with States before determining appropriate remedial action, urged that the preemption provision be

removed, the advocated that administrative costs borne by States in addressing hazardous cleanups apply toward the required 10 percent State match.

I am pleased that, notwithstanding the obstacles that that bill has had to overcome, there remains continuing interest in its broad goals and means. Today I would like to highlight two major aspects of the program that must not be sacrificed.

As the sponsor of a State bill establishing an administrative remedy for victims of toxic substance exposure, I am especially interested in seeing this particular component of the Federal legislation retained. The creation of a Federal cause of action for toxic injuries is nothing short of essential justice, and the development of a Federal scheme for adjudicating the claims of those who are the victims of negligent actions causing hazardous exposure is perhaps the last link in the chain of protection we owe to the public we serve. I respectfully request that your committee give this particular matter high priority.

Second, I think it equally important that the final product provide for reimbursement of State and local units for expenditures that they make to clean up sites eligible for Superfund moneys. The delays that result from an understandable reluctance to spend money that may well be provided from some other source are fatal not only to the State's own program, but, more importantly, to the personal health and property of the citizens who are victimized. Each day of delay increases the cost, the hazard, and the frustration. Those of us who have had to deal with the Gems landfill problem know this only too well. Any Federal program, or any State program for that matter, ought not to discourage prompt and responsible action. Failure to provide for reimbursement does, in fact, discourage responsible action.

In closing I should note that many of my recommendations are contained, Senator Lautenberg, in your bill—S. 2012. I applaud you for this effort, and offer you whatever support I may provide. Once again, thank you for coming.

Senator LAUTENBERG. Thank you very much, Senator Dalton, for your statement. I know this is a problem that you've been very much involved in. As chairman of the State Energy and Environment Committees and as a participant in the conference of State legislators of the Natural Resource and Environment Committee, you speak with knowledge, and we appreciate your views and recommendations very much.

And now we'll go to Assemblyman Bennett.

STATEMENT OF HON. JOHN O. BENNETT, ASSEMBLYMAN, STATE OF NEW JERSEY

Assemblyman BENNETT. Thank you very much, Senator.

I am John O. Bennett, assemblyman from district 12, and ranking minority member of the assembly Agriculture and Environment Committee. I have another distinction: I represent the legislative district that is home to more sites on the national priority list than any other legislative district in the Nation. So I have a very special—and selfish—interest in the fate of Superfund.

Before I begin, I would like to join my colleagues in welcoming you to Trenton, and thank you for your efforts to deal effectively and responsibly with an issue that might well lend itself to political posturing. The broad range of witnesses you have assembled here today does justice to the complexities of the issues involved and testifies to your efforts to deal with them comprehensively and honestly.

I, of course, share the concerns expressed today by my colleagues—Dan Dalton and Ray Lesniak—and wish to second their recommendations for the reauthorization of an improved CERCLA. Because I know that your time today is limited and many other people are scheduled to testify, I will confine my remarks to one specific aspect of the legislation—the costs of operation and maintenance attendant upon the remediation of sites with Superfund moneys.

On this issue, I speak from experience. As you may well be aware, the draft report on the Lone Pine landfill in my district, identifying the alternative remedies and estimating the perspective costs thereof, has been prepared. I have seen that report and I am concerned. I am concerned because I think the State and local governments will have difficulty meeting the annual operation and maintenance costs that will be required even after the initial capital costs have been largely borne by the Federal Government. The capital costs range from $10 million to $43 million, depending upon the alternative. And while the O&M costs do not demonstrate that wide a range, they do go as high as $275,000 annually, and we are talking in most cases of at least 25 years. This is just one site. There are five in my legislative district, 85 statewide. I hope you can begin to see what an onerous financial burden just these costs can be.

You should be aware as well that the alternative that requires the lowest initial capital cost almost invariably results in the highest O&M costs. Now I understand the desire of the Federal Government to spread the limited Superfund moneys as widely as possible. For reasons of both equity and politics. But one must realize as well that there is a built-in incentive for EPA to choose the least expensive upfront alternative method of remediation, even if it does result in higher costs later, for the back-end costs are not borne by Superfund. And I am afraid that in many cases, the inappropriate alternative will be selected, because the choice may be dictated primarily by financial rather than by environmental considerations.

Accordingly, I would hope that your committee would give due consideration to this particular aspect of the legislation. As I read Senate bill 2012—sponsored by Senator Bradley and yourself, Senator Lautenberg, section 2 directly addresses this problem by requiring the Federal Government to be responsible for a percentage of the O&M as well as the capital costs. I enthusiastically support this provision.

Thank you for your time and, I would be pleased to answer any questions you may have.

Senator LAUTENBERG. Thank you very much Mr. Bennett.

Senator Lesniak.

STATEMENT OF HON. RAYMOND LESNIAK, STATE SENATOR, STATE OF NEW JERSEY

Senator LESNIAK. Thank you, I, too, want to commend you along with my colleagues for coming here today and your intense interest in the hazardous waste problem in New Jersey as well as your interest in the raw sewage dumpage prominent in terms of all our environmental concerns that we hold dear here in New Jersey; and I also want to say I'm honored to give testimony today alongside my colleagues, Senator Dalton and Assemblyman Bennett. They can't say it, but I will say it, they have been in the forefront for a healthy environment in the State of New Jersey for our programs, which many States are adopting well after New Jersey has already initiated them.

Because our own spill fund has been so vital to us, I was extremely distressed with the provision in Superfund that permitted industry to argue that, in fact, the Federal act preempted our fund. I fought that preemption in the costs; and though we have won the formal court battle thus far depending upon the pending appeal from our State fund and, in turn, tied up the $100 million in bond moneys that are available for hazardous cleanups, which expenditures conditioned upon the exhaustion of the spill fund and ineligibility for Superfund. We thus find ourselves in this State with the frustrating situation of having an estimated 1,500 sites of hazardous discharges of which 85 are on national priority lists and having more than $125 million in funds dedicated to their cleanups, State funds available to their cleanup, paralyzed by the cloud of preemption. I am convinced that Congress and the enacting Superfund did not intend to hamstring the State's own efforts to clean up their own State, but as long as the language of the existing bill can be construed or at least it can be argued to preempt state funds that will be its partial effect. Your committee and the Congress must remove the preemption clause clearly and completely.

Now, the other major concern I want to talk about today is the issue of leaking underground fuel tanks because I know your principal theme today is ground water contamination. Leaking and corroded storage, particularly gasoline tanks are the leading source of ground water contamination in this State at the present time. I am pleased to see that the Reauthorization Act has a component which addressed this problem and particularly pleased that it provides for delegation to States that have the responsibility to regulate the installation, monitoring, testing, and replacement of such tanks.

I am the sponsor of legislation at the State level to carry out these responsibilities. The proposed Federal legislation provides that the Federal standard is to be regarded as a minimum. It's important that this provision not be amended or changed in any way. Since leaking underground storage tanks is the single most significant source of ground water contamination in this State we, in New Jersey, must retain the authority to make our standard as stringent as we feel necessary. Uniform national standards would constitute only a superficially equitable standard at the sacrifice of environmental safety in the State of New Jersey.

Last, I would like to suggest that the committee consider a form of national standard similar to what we have here in the State of

New Jersey. We recently had signed a law which requires firms that handle hazardous materials to clean up their sites before they close down or before they sell their operations for another purpose. If the Federal Government would require that each State adopt this type of law with minimum standards, what we could ensure that we wouldn't need to continue reauthorization of Superfund because many of the Superfund sites are abandoned industrial plants. What we have seen is plants closing down here in New Jersey and throughout the Nation leaving the State and leaving a legacy of poison behind for the taxpayers to pick up and for the residents to be afflicted with. If the Federal Government would consider requirement of State adopting that we can assure that we won't be back here 5 years later, then 10 years to reauthorize Superfund again.

Senator LAUTENBERG. Thank you, Senator Lesniak. I thank all three of you. The suggestions that you have made are important ones.

The one thing that we have to do, I believe, is to try wherever possible to establish Federal standards so companies do not abandon New Jersey and run away from their environmental responsibilities, just to pick up with a fresh start elsewhere. I think that we can encourage the business community to share these burdens with us. I believe that we have a more forthcoming attitude about the environment. We're going to have a panel soon from the business community, and I'll be interested in their comments, but I think it's fair to say that matters like preemption will have to be dealt with. We will be discussing preemption at the markup of our bill. I know how important it is for New Jersey to raise its own funds and to secure cost credits from the Federal Government so that New Jersey can move aggressively to detoxify over 85 Superfund sites. We are a forward-looking State, as I think all of us in this room would acknowledge, and we want to get on with the job. We don't want to be held up by the painfully slow pace of the Federal Program. There is a popular sentiment in the Senate to say "look, the States that are willing to put forth their money being in the priority list, whatever, they want to get going on it, ultimately we're going to save the country more money."

I want to just ask a couple of questions that any one of you may choose to answer. I would start by asking you this question. Isn't it true that New Jersey has a compensation board for review and granting of claims for personal injury?

Senator DALTON. [Nods head in the affirmative.]

Senator LAUTENBERG. How are the claims funded? What are we talking about in terms of the possibility of recompensed people?

Senator DALTON. In the State presently, Senator, there's two avenues available for a victim to receive some type of compensation. The first one is, obviously, our present tort system. Second, however, we have established a program from the Landfill Closure and Contingency Act which I sponsored and was passed with the help of the two gentlemen on my right that would provide a victim with bodily injury and also a property damage compensation if, in fact, it can be proven that it was due to the operation or faulty closure of a landfill. OK? However, in many cases the spill last year in Montclair and in many cases there are no methods of compensat-

ing victims where the origin of the waste is not a landfill, where the origin is some industrial site, and many cases what happens that the victims suffer extreme or significant expenses as far as medical bills. There may be some disability involved which it's not disability related to employment, they just happen to be living in an area where they've had exposure from a nonlandfill source. And what the proposed bill in our State intends to do is provide these people with a type of compensation, whether it be medical, relocation, and there's two other criteria that we have that are compensable and so that they can pursue the matter in the court system.

In other words, what we're saying we don't want them to gain any type of windfall, but at the same time we want to make them whole while they pursue the matter in the courts; and so, as I said, there are two avenues right now, the tort system, but it's quite lengthy and no one's more aware of that than you, and then there's the contingency fund, where the landfill is the origin of the hazard.

Senator LAUTENBERG. But that doesn't take care of the full need, it doesn't take care——

Senator DALTON. No, not at all, so your sensitivity in your bill and Senator Bradley's bill to that I think it's extremely important; and there's many of the people in this room as well as people in my district have been exposed from a nonlandfill source, and they are literally going bankrupt trying to meet their medical costs.

Senator LAUTENBERG. Exactly. And that's the worse part of the final chapter. To offer the final chapter as written after youngsters become diseased or a family member is lost. The same citizens then have to bear the burden of paying for medical and other costs. This is more than any one should have to endure. I think that it's fair to say that New Jersey, as a State, has to step up to its responsibility to protect its citizens along with the Federal Government. Many of these tragic situations arise because they were permitted by law, permitted by lack of enforcement, and so forth. It is not by choice that our citizens are exposed. They must not be made to fear the financial, as well as personal costs, of this exposure. We have to look very seriously at and try to get something by way of a compensation program in the reauthorization.

Let me ask any one of you this question. What can be done to give families, like those whose members trestified here this morning, adequate fresh water, clean water, in their homes? We heard the stories about people having to purchase supplies of water at astronomical costs to the average working family. It is hard to imagine that the process of having to cart in water to bathe, cart in water to cook with, to meet the simplest of needs, costs hundreds of dollars a month to people. I was told by one person in private that it got to the point where people were actually stealing supplies of water off the neighbor's porches. What can we do in the State to remedy some of these situations?

Senator LESNIAK. Senator, we've amended our Spill Fund so that could be one source of revenue for it.

Senator LAUTENBERG. Could be.

Senator LESNIAK. One of our problems we have, as Senator Dalton said, a two-billed cleanup problem and to the extent that we keep using the Spill Fund for other aspects of the problem in addi-

tion to the cleanup of the toxic dump sites it's going to be strained and it is strained, in fact, beyond its capacity. So, the expansion of Superfund, I think, is the critical element here. The more the Superfund can fulfill these responsibilities, these overall responsibilities, the more our State can be used for the ancillary.

Senator LAUTENBERG. I think, Senator Lesniak, the point was well made in terms of the reauthorization and the expansion of Superfund. Meanwhile, I would urge you as State legislators to see if you can do something to help some of these families meet their basic needs. We're not talking about providing relocation expenses. We're not talking about many of the things that could appear to be beyond that which is of bare necessity. There should be some way to help people get a decent water supply to their home without bankrupting them in the process. When people get a building permit or a [C.O.], Certificate of Occupancy, they ought to know that they're safe and that they're protected; everybody. They can see the police force, they can see the fire department, you can see the roads, you can see sewers hopefully functioning, but the fact is that the things that are so basic to life are just assumed. Communities ought to bear the responsibility, certainly ought to be more cautious in the way these permits are issued, and how they repond to the citizens who live near abandoned hazardous waste sites.

Senator DALTON. Not to interrupt you, but Senator Lesniak introduced legislation which was passed in the law to provide for testing of wells prior to the sale of a resident so that a person who is a potential buyer can be assured that the water is safe.

Additionally, we passed, and I was responsible, signing into law a bill that provides municipalities and authorities with low interest loans so they could extend their sewer lines and their water line, this, in fact, they have a significant pollution problem in one part of the town; but I think our point is well made, and that is in many cases what happens, and it happens, particularly it's happened a lot in the southern part of the State, Senator, is where you have a tremendous portion of the population on wells, and there is a contamination of those wells from an unknown source where there's not an identifiable source, and that those people in many cases have to look for then a clean source of water. That is just not readily available in this State, and I suspect throughout the country and in many cases what happens—and in a particular case in Waterford Township, my district, is we've had to have the State police bring in water buffalos where those people would utilize the water buffalos for a significant amount of time.

In order for a Spill Fund to be tapped in for this matter there has to be a general agreement between the local government, between county government, and between State government that the potential remedy, whether it be a filtering system or whatever, is generally agreed upon. That happening in those cases is not likely; and the reason is that if you look at the Spill Fund, there might be—we, in fact, may look for the least costly way of cleaning up that water where the county or local government might look for a remedy that's more expensive, and that is a problem that you correctly identified that it's our responsibility to remedy, but I think if Senator Lesniak is saying it's a State responsibility, but certainly

we look for some of your help as far as the funding in order to address this problem.

Senator LAUTENBERG. That is exactly why I aggressively sought to be appointed to fill the opening on the Environment and Public Works Committee. By speaking with my colleagues in the Senate on New Jersey's severe environmental problems, I was able to secure, this critical assignment to meet New Jersey's needs. I pledge to you, in full public view, to do whatever I can to get the Superfund reauthorized, to get expanded funding, to get help for New Jersey. However, I also ask that you do whatever you can at the State level to help affected families. Thank you very much.

Next panel, please, that would be Dr. Highland, Dr. Kenneth Rosenmam, Dr. John Gaston.

I'm sorry, you'll have to identify yourselves. Please just identify yourselves first, each one of you.

Dr. HIGHLAND. Joseph Highland.

Mr. GASTON. John Gaston.

Dr. ROSENMAN. Dr. Rosenman.

Senator LAUTENBERG. I would ask you, Dr. Highland, to go ahead. I think you're the first one to testify if you would, please.

STATEMENT OF JOSEPH HIGHLAND, SENIOR RESEARCH SCIENTIST, PRINCETON UNIVERSITY

Dr. HIGHLAND. First, let me take the opportunity to thank you for the opportunity to testify today and to introduce myself. My name is Joseph Highland, I'm a senior research scientist at Princeton University, and I codirect the Hazardous Waster Research Program at the Princeton University. The last 5 years or longer I've had an opportunity to deal with a number of hazardous waste issues, specifically cleanup issues, both the need for cleanup and the adequacy of proposed remedies, and studying the adverse health effects experienced by exposed individuals as well as their future risk of disease. Based on these experiences I would like to take this opportunity to strongly urge you and your colleagues to reauthorize Superfund and to make at least two fundamental changes, both of which I believe will aid injured parties seek recovery for the damages they sustained.

The first is the establishment of a Federal cause of action to expend the available tort remedy and make it more available for injured parties.

The second is the establishment of an administrative compensation system to provide emergency relief from unacceptable exposures and limited compensation for out-of-pocket medical expenses and loss wages in cases where injuries that are suffered are believed to be related to toxic chemical exposure and given hazardous waste sites.

Let me share a few of my recent experiences that lead me to this position. First, I think it goes without saying that we need continued and expanded efforts to clean up hazardous waste sites throughout the country, whether it's the Wade site in Pennsylvania, the Gem site here in New Jersey, the Seymour site in Indiana, or any of the literally 1,000 or more other sites around this country. It has become frightfully clear that waste once disposed of on

these sites in many cases located on these sites and created serious environmental contamination and public health threats. Once these chemicals reach the environment they often contaminate the air we breathe and the water we drink, and the consequences of that contamination can be quite serious. In some cases current health damages have already occurred. And let me note that it is scientifically very difficult to prove that such damages have occurred, but there are several sites where adequate studies have been done, which I believe clearly demonstrate that adverse health impacts have occurred among exposed individuals.

Let me briefly cite two examples. One is the Hardeman County site in Tennessee. The Hardeman County site sits in the rural back area of Tennessee between the towns of Tune and Tee next to residential homeowners, which sets a hazardous waste site containing approximately 350,000 pesticide wastes. Contaminants from that direction have leaked into the local aquifer. People using the water supply have been exposed and reported a series of medical problems, including adverse effects on liver, kidney, rashes, and optical atrophy. A large group of these young people who were exposed are currently going blind because we believe they were exposed to carbon tetrachloride in their potable water. And let me note for you that the concern of the use of potable water is not only from its direct ingestion, but from showering and bathing in this water. In fact, in this case people literally reported feeling faint and dizzy in the shower when exposed to the chemicals which were from those water supplies and being inhaled by those residents.

The second site I will give you as an example is a site which you know much about, Love Canal site, Niagara Falls, NY. Suffice it to say, previous studies have been controversal and have suggested problems, but the data has been judged inadequate. Soon to be purchased are a series of studies by colleagues of mine and myself that, I believe, clearly demonstrate that health and the well-being of children in Love Canal is adversely affected by their exposure to toxic chemicals. So, the proofs are at hand, the current health damages can occur from exposure to toxic chemicals that have leaked from hazardous waste sites.

Current health damages should not be our only concern. Risk of future disease is also very important. Exposures today can lead to significant future risks. And let me just cite for you one case here in New Jersey, the Jackson Township site. You heard this morning from Jim McCarthy about the personal matters that affronted his family and his community in terms of the Jackson Township case. I had the opportunity to ask on behalf of Mr. McCarthy and those other residents in Jackson Township as a toxicologist in their tort case. I think one of the most significant findings was that the exposures that have occurred already leave a large number of people at risk and significant risk of future disease. So, what must we do? I believe we need to continue the long process of remedial investigation, cleanup literally thousands of sites and so that injured parties will have a better chance of recovery for the damages and that I suggest by the establishment of the Federal cause of action. And I believe it's necessary to include with Superfund provisions for emergency relief from continuing unacceptable exposure to toxic substances and to provide the opportunity to establish the neces-

sary scientific proofs that can be used to award limited compensation for out-of-pocket medical expenses and lost wages.

Let me just finish by leaving with you a copy of a report recently prepared by students of Princeton University and myself that deal specifically with an issue you asked Senator Dalton about, and that is the current compensation systems available in the State of New Jersey. This report reviews both the tort remedies, the proposed State legislation, and bears directly on Federal legislation that has been considered in the past. Thank you very much.

Senator LAUTENBERG. Thank you, Dr. Highland. It confuses me that the debate goes on with experts throughout our society, two sides of the lung cancer issue, two sides of the health issue. At times, I guess, there's a danger of jumping to conclusions, but when I see what's happened to families, not only in New Jersey but across the country, exposed to contaminated drinking water, exposed to contaminated air on a continuing basis, where there's a significant deterioration of health, and you see the dramatic change in health when someone moves away from a polluted environment. It is our first responsibility to act as quickly as possible. We had people from Woburn, MA, testifying before our committee in Washington. Are you familiar with Woburn?

Dr. HIGHLAND. Yes, I am.

Senator LAUTENBERG. Almost overnight children's health improved, their respiratory congestion disappeared almost overnight when they moved from near the Woburn site. Female children were having discharges from the openings in their bodies, and it was awful. When they moved away from these places things started to improve. I don't know what the cause—what we have to do in order to get the causal effect and the result linked so that it is established beyond queston.

Please, let's go on. Mr. Gaston.

STATEMENT OF JOHN W. GASTON, DIRECTOR, DIVISION OF WATER RESOURCES, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mr. GASTON. Senator Lautenberg, I appreciate the opportunity to address you and add our voice to that of Governor Kean and other witnesses seeking reauthorization of the Superfund program. The Division of Water Resources within the Department of Environmental Protection has been charged with the responsibility of protecting the waters of our State and insuring our citizens that they will have a sufficient and potable supply of drinking water. We perform this mission in many ways, but one of the most important is in partnership with the Division of Waste Mangement which has the primary State responsibility for cleanup of toxic sites, in particular, Superfund sites. My emphasis today will be on the absolute need to protect our ground water and to urge immediate reauthorization of the Superfund Program as a key element in helping us meet that obligation.

Approximately 50 percent of New Jersey's population and 80 percent of its area is dependent upon ground water. Population density is high, and despite its size the State geology is complex and highly variable, ranging from fractured shale and crystallines to

cavernous limestone and coastal plain sediments. Compounding these conditions is an economy heavily dependent upon chemical and refining industries. New Jersey also generates about 8 percent of the Nation's hazardous waste, the highest of any State. As an inevitable consequence, aquifer contamination has occurred in many locations through poor industrial housekeeping, spills and accidents of all types, deliberate dumping, illegal discharges, leaks from subsurface storage, landfills and so on.

In 1975 the Governor issued an executive order directing that a concerted effort be made to investigate factors related to the high incidence of cancer in New Jersey. As a result of that executive order, DEP's Office of Cancer and Toxic Substances Research was created. This office has been renamed the Office of Science and Research. One of their primary tasks was to measure concentrations of chemicals suspected of leading to an increased risk of cancer in humans. As part of that effort, extensive data-base was developed on some chemicals occurring in ground water aquifers in the State. The report they issued, which I've submitted as part of my testimony, summarizes data from the first 2 years of their ground water study and discusses sources and behavior of chemicals in ground water, and some of the implications for human health. They looked for 50 chemicals in three different groups in well water samples from throughout the State. These three chemical groups are halogenate volatile organics, chlorinated pesticides and related compounds, and metals. Their report summarizes data from 1,118 samples taken from 670 well. Although this is a significant sample size, it is but a small portion of the number of potable wells in New Jersey. One or more of eight volatile organic compounds were found at concentrations above 10 parts per billion in 16.6 percent of the wells tested. In 3.1 percent of the wells in the study, concentrations of one or more of these eight chemicals exceeded 100 parts per billion, a clearly unacceptable level.

Although more than 95 percent of the wells tested in the study can be considered acceptable for potable use, this is no cause for complacency. The fact that 3.1 percent of the wells had volatile organics above 100 parts per billion serves to confirm the vulnerability of ground water to contamination. It is imperative that everything possible be done to prevent or minimize entry of toxic chemicals into ground water.

New Jersey has taken the lead in addressing this area by the recent passage of major amendments to the State Safe Drinking Water Act. These amendments provide for the periodic testing of all public water supplies and for the establishment of a Drinking Water Quality Institute which will be responsible for establishing maximum contaminant levels for over 20 organic compounds including all those found in the study done by the Office of Science and Research. In that regard we are taking the initiative ahead of the Federal Government and EPA for the setting of levels, in an effort to protect our citizens.

In 1983 the New Jersey Geological Survey in the Division of Water Resources published the New Jersey Ground Water Pollution Index, which I've also submitted as part of my testimony, which listed over 500 ground water pollution incidents investigated by our division over a 10-year period. Even that list was not com-

plete, but consisted primarily of those incidents which have the most serious impact on ground water quality. For example, the index only includes a few of the hundreds of spills from ruptured gasoline and fuel oil tanks, which contaminate ground water each year, but have not spread to a potable well.

However, the information used in developing the index has resulted in the closing of over 900 private wells and required treatment or the sealing of over 190 high-capacity industrial and public supply wells. Approximately 25 percent of the ground water pollution workload is Superfund cases; but, more importantly, I want to emphasize that every Superfund case investigated so far has uncovered ground water contamination. When we recall the statistics that say almost 50 percent of New Jersey's population and 80 percent of its area is dependent upon ground water, we realize the cloud that Superfund sites cast on all our public decisions about water.

Nearly 70 percent of the caseload we handle results from the effects of industrial solvents on ground water quality. Many thousands of these compounds are in everyday use throughout society at home as well as in the workplace. The manufacture and use of these often toxic chemicals has increased exponentially since World War II. When contaminant sources are stopped—and many of them have been—and a decontamination program is recommended and finally installed, many years of expensive pumping and treatment are required to restore ground water quality. Presently there are 43 industries performing ground water cleanups, but we must note that no major aquifer restoration program involving industrial solvents has yet reached shutdown concentrations. They're all going on and some have been going on for as much as 10 years.

As we discuss ground water problems and the potential for future Superfund sites, I think it's critical to understand that the State of New Jersey has the most sophisticated and comprehensive ground water permit program in the United States. Unlike Federal law, New Jersey law requires that any discharge of waste into the ground, including nonhazardous waste, must obtain a permit and comply with water quality standards. This requirement protects the future use of the resource as well as controlling discharges.

In concept, Superfund and RCRA are complementary acts. Superfunds deals with problems produced by past activities, and RCRA deals with existing facilities and seeks to prevent future Superfund cases. I raise this analogy because, in the area of ground water monitoring requirements, New Jersey has demonstrated a signficantly higher level of performance under the RCRA program than any other State. Over 85 percent of our RCRA facilities are in compliance with Federal regulations for ground water. This performance is illustrative of the type of commitment New Jersey has made to implementing an agressive ground water protection program. In this respect New Jersey is years ahead of most other States.

Another major example of our commitment to remedy ground water contamination problems is our effort to initiate private cleanups of hazardous sites. This program predates both Superfund and the publicly funded hazardous waste cleanup programs insti-

tuted at the State level. These cleanups are accomplished through enforcement action and negotiations with culpable parties found to be responsible for pollution. Because this program has acquired much experience over the years it has matured into a highly successful complement to publicly funded cleanups.

Since the advent of Superfund, this program has been tailored to interface with and essentially constitute a significant part of the Superfund process, and is an important link in our partnership with the Division of Waste Management and EPA. This highly successful program has eliminated the necessity of placing many hazardous waste sites on the national priority list and has resulted in millions of dollars of public funds being preserved for other cleanups on the Superfund list.

As might be imagined, there are difficult negotiations which must take place leading to a private cleanup. This requires that personnel be equipped with a strong negotiating hand as possible. One important incentive is the threat of liability for a publicly funded cleanup, which is typically more expensive for a corporation than if the firm were to perform the work by itself. Additionally, many larger firms are highly sensitive to their corporation's name appearing on the national priority list. To continue this successful complementary program we need the leverage the Superfund program provides at the negotiating table.

As we all know, the problem of cleaning up hazardous waste in New Jersey is enormous, much too big for one program or one agency to deal with by itself. In our presentation we have tried to indicate that we are a responsible State that is making every effort possible to do our share in cleaning up this Nation's toxic waste. We ask you, the members of this important committee, to join with us in this task by making your best effort to see that the Superfund legislation is reauthorized now. I thank you for allowing me to address you today.

Senator LAUTENBERG. Thank you, Mr. Gaston. I'm pleased to hear that many private cleanup efforts are underway. The language that you use in your text, "Strong negotiating hands," is really conjuring a picture in my mind. The picture is of a head in the guillotine with someone saying, "If you don't, that's what we're going to do."

That's a very strong negotiating hand. Of course, we want to encourage as much as possible of the business community, and I think an awareness has to develop and I commend you and your department for initiating cleanup action. If you can get the cleanup done privately, it will cost a lot less money and perhaps head off a tragedy that's in the making before it comes about.

I'd like to ask you this question. Did you hear Mr. Adams? Do you know Ray Adams?

Mr. GASTON. Yes.

Senator LAUTENBERG. Do you know about his community's problem in having water available for basic necessities of life? We heard the first witness testify, Dr. Highland, about the risk of contaminated water beyond drinking it. Is there anything that we can do to obtain a water supply for Mr. Adams and for others who don't have an available source except at great personal financial strain?

Mr. GASTON. The problems that Ray Adams and the people in Pomona Oaks have had and several other communities in New Jersey have had are really some of the heart-rending problems we've had to deal with as administrative officials. What we have begun to do is to use all available methods to solve the problems in Pomona Oaks and other communities.

In 1981 the voters in New Jersey passed a Water Supply Bond Act, and that provides for moneys on a loan basis to correct water supply deficiencies. Now, as a practical matter, the loan money and the cost per unit for each homeowner does not necessarily result in economically attractive solutions. So, what we've been doing with our colleagues in the Division of Waste Management, and with our colleagues up at EPA, is trying to use all the available financial mechanisms, the Spill Fund, the Superfund, our loan program, and some diplomatic negotiations with private purveyors to assemble up-front capital and to share the cost of that up-front capital among municipalities, the purveyor, and ourselves to bring about solutions that are cost effective. The simple answer to your question is that we're in the early stages of putting those solutions together, we're hoping that Superfund would play a more prominent role particularly when there's no question that people's health is in question, and we're using our State resources as well to put packages together, that can solve problems. We're in the beginning of that process, not the end, and as we look at the State's safe drinking water, we're going to have more of these problems that have to be dealt with.

Senator LAUTENBERG. Thank you, Mr. Gaston.

Next we have Dr. Rosenman.

STATEMENT OF DR. KENNETH D. ROSENMAN, DIRECTOR, ENVIRONMENTAL AND OCCUPATIONAL HEALTH SERVICES, NEW JERSEY DEPARTMENT OF HEALTH

Dr. ROSENMAN. Thank you, Senator Lautenberg, thank you for the opportunity to speak today. My name is Kenneth Rosenman, I'm a physician and director of Environmental and Occupational Health Services for the State health department. I commend you on your efforts to reauthorize Superfund and hope you will support many of the amendments and changes that have been addressed today. I wish to limit my comments to certain changes we feel are needed in terms of health studies. The New Jersey Department of Health has conducted health investigations around hazardous waste dump sites in New Jersey, particularly Gem's and Price's Pit. We feel further health investigations in the area of hazardous waste dumps need to be done.

We see two items that need to be addressed in the reauthorization. One is a mechanism to ensure a more timely response by the Federal Government to fund health studies. As an example, a year ago the National Institute of Occupational Safety and Health in cooperation with the New Jersey Department of Health and Missouri Department of Health began the process of requesting money from Superfund for a health screening of workers exposed at the Diamond Shamrock dioxin site in Newark and an analogous site in Verona, MO. Although we are told the funding process is moving

along, no funds have been released to date to allow some of the most heavily dioxin-exposed individuals in the country to receive medical examinations. There is no way that the Center for Disease Control in Atlanta can respond for the whole country. An expedited mechanism for funding investigations needs to be set up.

The second problem is funding in general. The majority of the studies done to date by the New Jersey Department of Health and other investigators in the country have been health questionnaire surveys. This type of investigation, with no surrogate measures of exposure, does not lead to definitive-type answers. We, as others, have found that individuals living near dumps or ingesting water with low-level contaminates will have increased medical complaints. Without adequate measures of exposure such as monitoring of contaminants in blood or urine samples and other environmental samples that allow investigators to accurately determine an individual's exposure, we will never be able to define the true hazards of these sites. These types of studies that I'm suggesting take a lot more funds than a simple questionnaire. Our studies to date do not allow us to distinguish between the stress of being told one lives near a contaminated site or an actual physiologic effect of chemicals. We certainly believe that the Superfund money is primarily intended for cleanup. That in fact, cleanup is the essential step that must be taken to prevent individuals from exposure to potential contaminants as well as the necessary treatment for individuals currently exposed. We do, however, feel that adequate funds for health studies be allocated for two reasons.

One, to help prioritize cleanup; and, two, to better define individuals at risk to both support the need for cleanup and/or define that true risk. We do not believe that health studies are necessary to begin a cleanup nor that negative health studies indicate the absence of a need for cleanup. A majority of cleanups have been and should be based on preventing significant exposure to individuals. We do see health studies as assistance to our citizenry in helping to define the health risks of what can be an overwhelming economic and social crisis to both themselves and their families.

Governor Kean has proposed to increase funding to the New Jersey Department of Health to increase our capability to conduct health investigations around dump sites. We encourage the Federal Government to similarly address the serious needs in this area. Thank you.

Senator LAUTENBERG. Thank you very much, Dr. Rosenman. I would ask either you or Dr. Highland a question about the chemicals that have been reviewed so far.

How many chemicals have been adequately tested? Is there a large number of chemicals out there that need to be tested? What percentage have we completed? Have we, in fact, discovered those that are of greatest concern?

Dr. ROSENMAN. Well, there certainly are many chemicals out there and it's estimated that there are 50,000 to 60,000 chemicals currently used in our industrial society, and one can say for most of them, the majority of them, probably more than the majority, there is inadequate toxicological data to determine the potential hazard. If one looked at how many of them there are actually human health studies, that number is even fewer. We certainly

have a long way to go even keeping up with the number of new substances that are introduced weekly into commerce, and that was the purpose of TOSCA, in attempt to at least try and keep up, but we have a long way to go.

Senator LAUTENBERG. Among the most worrisome are the known carcinogens, suspected carcinogens, the benzene family and the ethylene families. Could we take care of most severe health effects if we dealt with chemicals identified under those general classifications?

Dr. HIGHLAND. When you say "take care"——

Senator LAUTENBERG. It is amazing that when we talk about chemicals numbering in the thousands, it doesn't surprise anybody if we focus on a dozen or eight or five of the most toxic chemicals, do you think we could take care of identifying a large part of the problem that we have out there in terms—certainly of ground water contamination.

Dr. ROSENMAN. That last statement what I was going to say is we are—currently the State is in the process of setting up our right-to-know regulations and we have proposed 2,000 hazardous substances being initially covered by those regulations.

Senator LAUTENBERG. That's in the workplace you're talking about?

Dr. ROSENMAN. In the workplace, but also it's a community right-to-know. And of those 2,000 substances we feel that approximately 250 of them are carcinogens so certainly the number of eight that you're using I would consider an inadequate number.

Dr. HIGHLAND. I was just going to add if you take it upon something Mr. Gaston said earlier, I think you'll find that in many cases ground water contamination if you limited your concern to that, there are a heated number that are bad actors that keep showing up over and over and over again. A form of those, some of the ones you mentioned we have a data base at least sufficient to trigger concerns to supply us some knowledge to want to avoid human exposure under the circumstances.

I would agree with Dr. Rosenman of the universe of chemicals we have, obviously, a need for more knowledge, greater testing, et cetera, but I wouldn't want to leave you the impression we have inadequate knowledge upon which to act currently to make public health decisions.

Senator LAUTENBERG. Are the Environmental Protection Agency and Agency for Toxic Substance and Disease Registry working with a decent volume of knowledge in terms of identifying these top eight as the highest risk group, the ones most commonly found in ground water, or do we have an insufficient starting base? If we don't see this group, does this tell citizen that we're not dealing with potentially as great or greater a risk as otherwise?

Dr. HIGHLAND. I think it's fair to say that if you phrase the question if we look just to these can we tell people——

Senator LAUTENBERG. No. If you look just for these. These are the ones we see most frequently. Is that fair to say?

Dr. HIGHLAND. I think we find in ground water a series of chemicals, chlorinated solvents, trichlorethylene, polychlorethylene, ethane, the number of degreasing agents, things like that, and we have seen those repeatedly here in New Jersey and across the

country. Those may be the key contaminants of ground water. They wouldn't exclude the finding of other chemicals.

Senator LAUTENBERG. I understand, but my concerns are whether or not we can even start off with the appropriate danger signs to look for and there is a feeling among many of us not as professionally skilled as you, but if we work the suspected carcinogens, we're going to make a significant difference in the health of the community. Is that only a small part of the total? I'm not talking in absolute numbers. I'm talking about numbers of cases of exposure.

There are some very common forms of chemicals used in everyday products such as gasoline that may contribute to the majority of exposures.

Dr. ROSENMAN. I think the new Safe Drinking Water Act of New Jersey, which has a longer list than the eight we're talking about, comes closer. I'm not totally confident that that is a complete list, but it is larger than the list you're working off of. I think it comes closer.

Senator LAUTENBERG. I think in fairness you must give this answer. It's not a simple enough to say, "OK, if you get rid of these eight, we're in good shape."

I want to make sure EPA and the agencies responsible for evaluating chemicals have, at least, approached what you, as professionals, would define as the most dangerous substances and attempt to at least test for those chemicals in the environment and advise the communities exposed to these chemicals. We must build a data base of toxic materials, and share this information with all parties concerned.

Dr. HIGHLAND. Let me just add that I would be concerned if we limited ourselves to the eight chemicals, a short list like that. I would agree with Dr. Rosenman we're limiting it far too severely, and I suggest to you the concerns are far greater than carcinogens. There are things which cause other kinds of adverse health impacts which can be equally serious of concern so I think we need to do if someone suggested our limiting review of our situations to eight, ten, 15 chemicals, known or suspected carcinogens, that's not sufficient to deal with the nature of the problem we're facing today.

Senator LAUTENBERG. OK. I thank you very much. Unfortunately, time has passed too quickly and we have to get on with the next panel. Thank you.

STATEMENT OF HAL BOZARTH, EXECUTIVE DIRECTOR, CHEMICAL INDUSTRY COUNCIL OF NEW JERSEY

Mr. BOZARTH. I am Hal Bozarth. I'm pleased to represent views of the chemical industry here in the State on reauthorization of Federal Superfund Act. With me today are Dr. Thomas Hellman, immediately to my right is the Director of Health, Safety, Environmental Sciences of Allied Corporation. Also, vice-president of AT-SEA-INSINERATION, John Sandstedt and back of the room where we were sitting Mr. George Polzer, chairman of our organization. I think it's important to point out that Mr. Polzer, as I think you know, also serves the State as one of the nine members of the New Jersey Hazardous Waste Facility Siting Commission.

The CIC of New Jersey is a trade organization representing 72 manufacturing companies within the chemical and allied products industry. The industry is the largest manufacturing industry in our State. The chemical industry employs approximately 92,000 people of New Jersey representing 11½ percent of all the New Jersey manufacturing jobs. The industry ranks second nationally behind Texas and ahead of Louisiana in the volume of shipments of chemical products. We believe as many of the speakers here before us today that it is in the best interest of the citizens of our Nation and New Jersey, and, in fact, for the chemical industry of New Jersey itself to continue the job of cleaning up abandoned hazardous waste sites. We recommend funding for this task be accomplished what we feel a more equitable fashion. The Chemical Manufacturers Association [CMA] has testified for various congressional committees that Superfund should be reauthorized for another 5-year period. We in New Jersey agree with this position. We agree with our own Congressman Jim Florio, that reauthorization should, in fact, occur this year rather than 1985 when the act expires. Nothing should impede the momentum heretofore established. We urge you to look closely at the amount of dollars needed for this task and the manner in which those moneys are to be raised.

The current feed stock tax derives fully 70 percent of the total funding from only 12 companies; with virtually the total industry's share of Superfund, as you know, 87½ percent coming from the petrochemical industry. Those who support continuation of the Fund, and seek to increase the funding mechanism, ignore the basic inequity of this tax pointing the finger of guilt at the chemical industry as the only industry responsible for abandoned sites. Yet, even a cursory look at the types of industries which own or have contributed to waste sites being addressed under Superfund shows that it has been the greater industrial community and not just a few petrochemical companies which has disposed of the waste. At the multiparty sites EPA has addressed thus far we see large shares of waste from companies in the electronics, auto, aircraft, steel, lumber, and wood products industries. In fact, over half the identifiable companies involved with national priority list sites are not subject to the Superfund tax. Something must be done to correct this inequity by broadening the base of the tax. To continue the use of the narrow-based feed stock tax will have a significant adverse effect on our industry and obvious spill-over effect on the economy as a whole. As foreign-made products, and as raw materials are untaxed under the Superfund are imported in increasing amounts the erosion of our American chemical industry will continue. In addition to the $5 billion decline in the positive value of trade over the 3-year period of 1980 to 1983, the chemical industry nationally has seen 50,000 jobs disappear in the past 2 years. During that same time period perhaps maybe an additional year of New Jersey's chemical industry has suffered the loss of approximately 17,000 manufacturing jobs, more than one-third of the national loss. While we understand the public outcry for more money sooner, it is our position that it is inappropriate to raise more money in any given year that can not be effectively spent.

EPA Administrator Ruckelshaus, before Congressman Florio's subcommittee warned against using additional infusions of funding

beyond EPA's capability to utilize the money. Using EPA numbers, it can be estimated that approximately $850 billion per year may be needed. Because of the sheer magnitude of that number, it is extremely important to the chemical industry here in your home State that an equitable funding mechanisms be put in place. Aside from the reasons that I've just outlined, the New Jersey chemical industry is doubly burdened by the current New Jersey Spill Compensation and Commerce Control Act tax of which Senators Lesniak and Dalton talked. Not only do New Jersey chemical companies pay a significant portion of the Federal Superfund taxes, but also these companies pay up to $9.2 million per year for cleanup of abandoned hazardous waste sites pursuant to New Jersey tax. We're the only State that has a tax of that mechanism in place in addition to the Federal Superfund.

Let me explain how the tax in New Jersey works. The present tax is applied in two parts, the oil side of the fund raising approximately $5.6 million in 1983 predicated on a penny tax per barrel of petroleum products transferred. The chemical side, one of two sides, of the fund raised $4.7 million in 1983 predicated on a frontend percentage of value tax on certain feed stock substances. The New Jersey feed stock tax is quite analogous to the Superfund tax. When first enacted this fee stock tax was thought to be an equitable system, which would raise sufficient moneys to help solve the problem. Sadly, neither assumption was correct. Because of the number and type of feed stocks taxable, only a few companies paid taxes into the fund. Ironically, some companies pay large tax amounts into the fund while generating little or no hazardous waste while others which generated a large portion of New Jersey's hazardous waste were not taxed at all. In essence the feed stock tax system established no cause and effect relationship between hazardous waste generation and the cost of cleaning up abandoned waste sites.

For instance, one CIC New Jersey member paid $250,000 in New Jersey's Spill Fund taxes for 1981. In effect, this company paid roughly 3 percent of the total fund while generating only 118 tons of hazardous waste. State Senator Raymond Lesniak has recently introduced amendments to this act which would replace it with a waste generation/disposal tax. The net effects will be an expanding of the taxpayer base, raising almost three times the presently collected tax amount on the chemical side, and would establish a relationship finally between those firms that generate a hazardous waste and moneys collected to solve the problem. Only 220 firms across New Jersey now pay taxes into the spill fund. Senator Lesniak's amendments will expand that base of taxpayers to approximately 1,500. These firms are the ones now reporting hazardous waste generation pursuant to the New Jersey Department of Environmental Protection's manifest system. Members of the CIC of New Jersey feel that a waste generation/disposal tax would also work on the Federal level. In fact, a $50 per ton dryweight tax on hazardous substances as a potential funding mechanism for Superfund has been proposed. One final note regarding Superfund reauthorization. Some in Congress have called for the addition to Superfund reauthorization of a so-called victims of this compensation proposal. While we believe the question of providing compensation

for chronic diseases in America is a quite important subject, we feel that because of the broad health, scientific, legal, economic, and social issues involved it is inappropriate to treat this important matter as an add-on to a waste site cleanup program. We would recommend Congress carefully consider this question but consider it separately.

The chemical industry of New Jersey and the CIC appreciates the opportunity to present its views to you today on this important matter. We urge the committee to evaluate carefully the amount of annual funding needed to administer the Superfund program effectively and to provide for such funding on a broader basis than the current tax system. We'll be glad to take any questions, Senator.

Senator LAUTENBERG. Thank you, Mr. Bozarth. The testimony you've just given, as you know, and as you suspected, is contrary to some of the things that we heard this morning; and I respect the fact that you've come here and forthrightly presented your views. We're here to hear as many views as we can; but, as you know, we want to take action and don't want to see anything delay the solution of the toxic waste problem, whatever that mechanism might be.

Now, there are a couple of things that you said that are rather surprising. One is that you said you support reauthorization of the Superfund this year.

Mr. BOZARTH. That's correct.

Senator LAUTENBERG. And you said in 1984, not in 1985?

Mr. BOZARTH. Yes, sir, that's correct.

Senator LAUTENBERG. There are two sides to that coin. The other side is that you are of the opinion $850 million was about as much, as industry and I want to use the term, swallow, but it's not a very good joke in this room. The fact of the matter is that there are other ways of solving the problem, bringing in private companies, and I think if it were simply a matter of site contracts, we could spend perhaps everything we lay our hands on and substantially more. What do you think that the 5-year funding level should be to accomplish the job of cleaning up?

Mr. BOZARTH. I think one of the benefits of having a finite time limit established in the act is so that the public forum such as we are participating in here today can take place. I think it's very important to the continuation of a positive cost effective and comprehensive program that you, as Members of Congress, get a chance to look at this program as it goes along. We think that there are many different assumptions today that we believed at least in the industry 5 years ago when Superfund was first authorized. So, we feel that it does no damage to the overall program to have a finite time limit and 5 years since it was the original choice of Congress seems to be acceptable to us.

Senator LAUTENBERG. In terms of the funding amount, would you comment on that?

Mr. BOZARTH. It's very difficult, Senator, and I'd ask my two colleagues to jump in if they may. Given the information specifically about the number of sites and about exactly what it's going to cost to clean up our caveat as mentioned in the testimony is that whatever money is raised be the amount of money that the EPA can handle to clean up the sites that they're working on. It makes no

sense if they cannot spend X amount of dollars to raise X plus five. I think that there's another side benefit. When you limit the amount of money "on limit" it gives the people in EPA the direction to make sure their decisions are made not only in a method to safeguard the health and safety of the citizens, but also to safeguard the taxpayers' investment in this fund. I think that's a prudent practice, and I believe we all operate under that kind of stringency within our own budgets.

Senator LAUTENBERG. I hear what you say, but I don't know where you came out. What I want to be certain of is that we understand exactly what your position is. It's important that even if we differ, that we be candid, and that in the interest of making sure that we understand one another, I'd like to ask you this. Is it your position that the decline of the American Petroleum Chemical Industry feed stock portion is due to the Superfund tax?

Mr. BOZARTH. No. We tried to structure that section fairly well so that you didn't get that impression. There are many things that impact upon the decline, if you will, the production of raw materials, there are a lot of factors, the movement to the Sun Belt, etc.—we have to remember that the industry really reacts in a global market rather than a national market and that there are many variables out there that do impinge on the healthiness of the industry. However, to say that the Superfund tax does not add on as part of those things in this case in a negative way to the Nation's industry is probably erroneous. We're talking large amounts of money here but know that's not the only thing that has cost us 17,000 loss of jobs.

Senator LAUTENBERG. I think it's important to have that record very clear. If we're not competitive in any industry, you ought to find out why we're not competitive and adjust to the competitive environment. That's not for this hearing. But that's been a view of mine about the way we conduct business in our country generally.

Could you provide the committee with a list of companies which you think are rendered less competitive as a result of this Superfund tax?

Mr. BOZARTH. I'm sure we can get that information for you. I think the one example I did put in the prepared statement is a New Jersey company and it is rendered much less competitive than people in other states because of ineffective double Superfund tax, if you will.

Senator LAUTENBERG. Less competitive than other States?

Mr. BOZARTH. That's correct. Because one of the positives of the Superfund Program itself applied nationally there are not 50 different systems around the Nation that companies have to comply with. However, as I pointed out, in New Jersey we have not only Federal Superfund tax but also a New Jersey State Superfund, if you will, which people in New Jersey then have to assimilate the cost of that second tax because no other State is applying that kind of tax in this way on the feed stocks. Again, it's the way the taxes apply which causes some of our companies severe problems.

Senator LAUTENBERG. So, is it fair to say then that New Jersey companies are discriminated against to the extent that we tax and others don't, and that the New Jersey manufacturers are at a disadvantage?

Mr. BOZARTH. Yes, they are.

Senator LAUTENBERG. It suggests one thing to me, and that is that perhaps in the enactment of a tax system that we ought to in some way allow credits perhaps for taxes that are paid in the States. We ought not to be discriminating against our companies. Certainly, we ought not to be discriminating against our citizens. That's where I start from and, again, we solicit your cooperation wherever we can get it. I know that you have to tread lightly because you are concerned about the economic side of things, but we had testimony in front of our committee a few weeks ago from Massachusetts and, in private conversation after the testimony, representative of industry said "I wish that all of my bosses and the executives in some of these companies could sit and hear this testimony and maybe, as a result, they would feel a little bit differently about it," and I think that that's important. I asked the committee to prepare a film if we could. I know that film was taken of that hearing and I'd like to distribute it, so that corporate executives, senior executives, can sit and see what happens when someone leans over a 7-year-old child, whose hair is falling out because of being treated with chemotherapy, and her the tales of woe that you know take place.

Mr. BOZARTH. Senator, we share those feelings.

Senator LAUTENBERG. Where do you live?

Mr. BOZARTH. I live in South Jersey, Gloucester Township, Senator Dalton's district, 2 miles from Gem's Landfill.

Senator LAUTENBERG. So you know.

Mr. BOZARTH. And the people I represent live in the State, are members of the State and the community and have the same fears and concerns that the members of the general public do; and I would be remiss if I didn't point that out and, again, to invite you to come to talk to the leadership of my organization to extend to them, as you have in the past the kinds of feelings that you have and report that you hear as you go around the State.

Senator LAUTENBERG. The question about the generators tax is one that's been debated quite a bit in front of our committee. It's been suggested that the States that have generator tax programs actually don't get anywhere near the share of the revenues that they expected and that it promotes a program that skirts the law in other ways. I think we're talking about people as small as individual proprietorships with drycleaning stores, businesses of that nature.

Mr. BOZARTH. If we can respond for a second. There's a reason other States have found back end taxes insufficient. To give credit where it is due the New Jersey Department of Environmental Protection has done an outstanding job. We were the first State in the Nation to have a comprehensive manifest system which tracks the waste from generation to the final disposal. We've had 4, 5, or 6 years' experience with that manifest system. We have the most stringent regulations dealing with the generation, storage disposal of hazardous substances.

It's our feeling that if there was an adequate resource base to look at that waste flow that you won't lose money in the end. In New Jersey Senator Lesniak is choosing the waste end fee, basically $20. We know that the given waste in the system has been cata-

loged for 6 years. We know where it's generated who transports it, who finally disposes of it. If you have those kinds of systems in place, you won't have the problem New York had, which went into that kind of a waste end system with an inadequate manifest system. You have to have everything in place.

They didn't know what the base of the waste was to begin with, they didn't know how to track it, and in New Jersey we're much more advanced than that.

Senator LAUTENBERG. I would ask that you continue to urge your associates and members of your industry to participate with the rest of the community. I know they are responsible people in business. Many of them, as you do and I do, live in the State, our children drink the water, play in the same area, and breathe the same air; but we cannot leave this responsibility to hapless victims who have neither the money nor the means to take care of the situations, those who suddenly find that their water supply is coming from a contaminated ground water supply, and then find that their new water supply is carried through asbestos manufacturing pipes. That's the ultimate insult. So, we need your help and we're going to press on this, Mr. Bozarth, you are courageous to come here. We see you moving over slightly. Support for authorization this year is a welcome statement by your association.

I do thank you for being with us.

Mr. Lanard, please.

Welcome, Mr. Lanard. If you will, just identify yourself and your organization for the record.

Mr. LANARD. Senator, if I may, Mary Ellen Lister is with me; she'll introduce the organization I'm representing to the committee.

STATEMENT OF MARY ELLEN LISTER, MEMBER, BOARD OF DIRECTORS, NEW JERSEY CITIZEN ACTION

Ms. LISTER. My name is Mary Ellen Lister, I'm on the board of directors for New Jersey Citizen Action who, with the New Jersey clean water action project, is organizing a New Jersey campaign against toxic hazards. I'm also here on behalf of the townships of Mansfield and Florence.

The New Jersey campaign against toxic hazards are a coalition effort of community, environmental, church, labor, minority, women's and tenant organizations committed to reducing human exposure to hazardous chemicals in the workplace and in our communities. I care about this campaign especially since I'm involved in a local fight to get my community toxic-free. At this point in the interest of time I won't reiterate our 11-year plight with an existing Superfund facility, but I can ditto the previous statements about the environmental hazards and experiences by those citizens who spoke this morning. However, I would like to add that methylene chloride and cyanide are not the problem in Florence, but existing Superfund site as well as a proposed countywide solid waste facility. We have some very serious problems and questions regarding the selection of this site. First one being that the public funds would be used to purchase a Superfund site which raises a question of who would be responsible for cleanup. Also, how to monitor the

ground water pollution, air emissions, and odor migration if an active community county facility were to be selected adjacent to and surrounding an existing Superfund site.

Another concern proximity to the site dedicated to senior citizens housing, which is 4,000 feet from the boundary of the proposed facility.

Health problems that we're aware of are eight cancer cases within 1 mile of the site. At any rate, clearly we know where there's the need to expedite cleanup. Also, Superfund site is not just the one located in Florence Township, also a need for stronger, much stronger environmental leadership in Washington than we have at the present time. Landfills should not be disposal mechanism of the future.

Also, I feel that landfill should not be allowed within close proximity of a known Superfund site regardless of whose community it's in. The New Jersey campaign against toxic hazards is working with local communities such as mine to help local cleanup efforts as well as on State legislation to use to control the use of pesticides in New Jersey. Our national priority at this time is the reauthorization of Superfund this year and enough money to get the cleanup done.

I'd like to introduce at this time Jim Lanard of the New Jersey Environmental Lobby. He'll discuss in more details our campaign's position on Superfund.

Senator LAUTENBERG. Thank you, Mary Ellen. That was an excellent statement. I do appreciate it, but you know now you're going to have to compress the rest of your statement because we have the Governor scheduled to testify. I want to hear what you have to say, but I also want to have a chance to ask questions afterwards.

Mr. LANARD. Senator, I will. The statement that we've handed to you will be submitted for the record.

Senator LAUTENBERG. Yes.

STATEMENT OF JAMES LANARD, LEGISLATIVE AGENT, NEW JERSEY ENVIRONMENT LOBBY

Mr. LANARD. I will summarize my comments. The public's perception in New Jersey, and I believe around the country, is that there are certainly too little being done too late; and it is being done at a very slow pace. We have a prejudice, and our prejudice is we feel that the public and community groups around the State have been excluded from meaningfully participating in the decisionmaking process for cleanups. We have not had adequate exposure to the information, we have not had access to the information which would let us make informed decisions about whether proposed cleanup plans are acceptable to us, we don't have the technical capabilities oftentimes to do that. I'll address in a second how I think we can overcome that problem. A quick overview for pollution in New Jersey which you have not heard yet today is the fact that Commissioner Hughey has pointed out that there are at least 1,100 potential toxic dump sites in New Jersey. Unfortunately, what he has told you his initial investigations won't be completed for even another 2 years. Concerning whether pollution is getting better or worse in New Jersey, the DEP itself reported that 1983 it

almost doubled the tax, the penalties that it levied as compared to just the year before for water discharge violations, and DEP stated when it explained this almost doubling of the penalties the increase indicates ground water emphasis where more serious problems have occurred. They also went out to report that in 85 percent of the cases concerning investigations of facilities which generate and treat and dispose of these hazardous wastes that 85 percent of these facilities were found in violation of the waste management or other applicable statutes were found. So, we are not confident that things are getting better in New Jersey. We are fearful that things are getting worse.

That brings us to our position on the Superfund. That's just sort of some of the perspective that we have and the reason now for our position. We think that reauthorization should occur in 1984 and we think that reauthorization should guarantee the revenue raiser of at least $15 billion within the next 5 years. We could live with a surplus if one was created. We doubt it would be if EPA does its job the way Congressman Florio originally anticipated the way it would. Certainly the way this new Congress can mandate as we will propose. Accordingly, we think that the funding mechanism should be made permanent. We don't fear the absence of public forums. We think that your committee and other committees in Congress could convene forums and public meetings, public hearings, whenever they wish; and it would not be dependent upon whether the Superfund was a permanent fund.

Let's talk about the feed stock issue which seems to be raised this afternoon whether there should be alternative taxing methods. It is truly that only 43 percent of the feed stock chemicals are taxed for Superfund purposes, but the EPA's own report indicates that 41 of the 50 most frequently identified wastes and substances at Superfund sites were feed stocks for their derivatives. There's an absolute direct relationship between feed stock taxing and chemical waste dump sites. The EPA reported that. We think that before any new tax structure should be adopted it must be unequivocally proven that it would be effective and raise the amount of money that is necessary. We do have a proposal, however, if we want to raise more money without increasing the tax proportionately. We could increase the number of feed stocks that would be taxed and to that end we would recommend the following feed stocks will be included in the Superfund: mining wastes, gasoline additives, lead, copper, asbestos, and zinc.

Senator Lautenberg, I congratulate you and strongly support your proposal for the funding of Superfund and for the long-term operation and maintenance. It's the only way that makes economic sense to clean up New Jersey and the country by making sure that cost effectiveness really means cost effectiveness and not short-term savings. We also think that a mandatory cleanup schedule should be enacted. We listed four of those points in our testimony, and I will skip over them for this presentation.

We also think that the toxic waste-related industries must be financially responsible for their damages. To that end we propose that the language in the bill include very specific language that talks about strict joint and several liability provisions. We also think that postclosure liability transfer provisions should be elimi-

nated completely. There's no real rationale to let the Government take over the responsibility and the economic liabilities of a dump site 5 years or so after it's been shut down by the industry.

Now, for your two key points, one has to do with compensation for victims. Victims' compensation is something that was strongly endorsed, and I think that when you take a rational look at what we are trying to do with Superfund you will see that victims' compensation is a necessary and essential component of Superfund. The way I look at it and the way the campaign has addressed this issue is that toxic waste cleanup is divided into two separate categories. One is the removal of toxic wastes from our environment and the other is the removal of toxic wastes from our bodies. And we cannot allow the Congress to just consider removal from our environment. We have to at the same time do the second task, and it has to be done we think at the same time. If you take that perspective that Superfund is the removal of or the way to solve a problem of environmental pollution and public health threats, then victims' compensation obviously becomes an important and integral part of Superfund.

Now, public participation, which is the other very, very crucial part of Superfund and one which we have not heard discussed in much detail today, citizens must have more resources to do their work. As you are, I am sure, aware, public confidence and governmental agencies on the Federal level and oftentimes on the State level are not what they could be and they're not because we have been excluded from access. Because we have had key personnel indicted because of different policy statements that administrators have made that lead us to believe that citizens don't matter when it comes to cleaning up their own communities. Therefore, we think that Congress has to legislate the fact that citizens and the victims do count and do matter; and to do that we would suggest the following.

One, give citizens the right to petition the EPA so they can include specific sites on the national priority list and EPA should also be mandated to explain why they've rejected the petition.

Second, before a cleanup plan is adopted there must be a full and comprehensive participation by the effective community.

We strongly insist, if I may insists before you, Senator, that technical assistance provisions to affected community organizations be drafted in the bill which would allow the expenditure of Superfund moneys for community groups to do their own investigation. And what we are suggesting here very simply is to in a sense duplicate what Government may have done or should have done at least and what industry may have done or could have done, but we think because of the severity of the problem, because of the long time where nothing has occurred, we must become an equal partner in the final cleanup plan; and the only way we can become an equal partner is if you let us get the resources. Congress certainly can do that.

By the way, just as a perspective the percentage of the cleanup costs for any facility for the technical assistance may be 1 percent. You may increase the costs of cleanup by 1 percent, but you're bringing in the community to participate in the national decisionmaking. And when you have that kind of participation eventually

we hope you get to concensus and when you get to concensus things can move much quicker without unnecessary delays through litigation or administrative procedures.

Citizens should also be given the right to sue and attorneys' and expert witnesses' fees be provided for strong emergency relief provisions which we've outlined in our proposal should be included.

In conclusion, let me just read the final two paragraphs that I've written here.

Senator LAUTENBERG. I'm listening.

Mr. LANARD. Without effective public participation provisions less than adequate cleanup plans will be adopted, protection of the public's health will not be guaranteed, and the toxic crisis will continue; but with meaningful public participation, better plans will be adopted, oversight of industry and governmental efforts will occur, a better relationship with government could develop, and the crisis should be abated and possibly any future problems being prevented.

The New Jersey campaign against toxic hazards appreciates the willingness to convene the Superfund hearing in New Jersey. Obviously, our problems here are very serious. Through close contact with our colleagues and friends and families who live in other States that our problems are not unique. Unfortunately, they are experienced all over. In fact, the testimony offered by community and environmental groups here would have been replicated anywhere that this hearing had been held. We hope when the committee considers the reauthorization of the Superfund that you think of New Jersey as representative of the national crisis and one that is not simply related to our State alone. With that perspective in mind we are confident that you will recommend comprehensive and stronger Superfund bill.

If I may just close with two comments, Senator, first is when we talk about the impact on the industries that are paying the tax in the Superfund you have to assess what that impact is, and it seems to me that the first question that we should ask is what percentage of the taxpayers' gross national revenues, whether it's gross receipts, what percentage of their gross receipts is going to payment to Superfund taxes. My guess is it's very, very small. They've never been able to present that information, and we have spoken with the national vice-president of the Chemical Manufacturers Association, and the final information still has not been forthcoming.

Senator LAUTENBERG. We had testimony in front of the Environmental Public Works Committee to that matter in which the industry spokesman suggested that some tax payments exceeded the net income of the industry. Now, I don't know whether that's relevant or not. I simply tell you that the response was "Well, it was a very bad year for business."

There were very few industries that made a lot of money this year, and what effect Superfund taxes had on business is certainly a reasonable question to ask.

Mr. LANARD. The last comment is we would not support and would urge the committee not to recommend giving a credit for the payment for State Superfund programs, and the reason for that is two-fold. One, we think that the State Superfund programs could, obviously, be paying for non-Superfund sites. And we wouldn't

want to give them credit if the moneys raised by the State were going for State facilities not related to programs, you know, sites in the State not related to the Superfund.

The other is that we live in New Jersey. We think since there's a relationship between feed stock use and the waste produced that we would want them to be collected there as well. Thank you very much.

Senator LAUTENBERG. You raised several interesting points. I would appreciate it if you could give a quick answer to a question before the Governor arrives. What would happen if we included the mining waste and other materials you suggest ought to be taxed as part of the feed stock tax, what revenue improvement would we get?

Mr. LANARD. Senator, I'll ask the national clean water action project, which has developed some information on that issue, to get that information to your office as soon as possible.

Senator LAUTENBERG. Second, is the question of the role that generators, waste generators, might play in providing funding? You were pretty specific about your support for the feed stock taxes. What is your organization's view on the waste-end tax?

Mr. LANARD. We would not want to say waste and tax revenues be used for cleanup initially. What we would propose if you thought it was necessary to try to test the water, so to speak, as to have a waste end tax revenues provision put in, that money would be used for noncleanup activities such as proposed by the national organization. Also that there be low-interest loans for industries that are adopting source reduction, recycling, and alternative use programs. Low-interest loans from that waste end tax. If you find out that the taxpayers are actually paying the tax, that you know what the set of taxpayers is, and that you know eventually you could raise the money that you could raise and that you have been collecting from the feed stocks. Then in 5, 6 years there could be a switch to a waste end tax, but in the beginning it should be experimental and not used for cleanup.

Senator LAUTENBERG. Mr. Lanard, if you could in very short form give me an answer to one question. You heard CIC testify that the CPA would not use more than $850 million per year. Do you see that there would be any problem in using whatever funds are available sensibly and effectively?

Mr. LANARD. The short answer is no. We think that with the mandates that we have proposed, and I skipped those four points in my testimony, with those mandates there would be more monies needed than would be raised initially under the Superfund Program so we don't think there will be a surplus and think the money will be spent effectively.

Mr. LAUTENBERG. We will have to move on now. We'll submit, in writing, a request for your analysis of what you think could be spent. Thank you very much.

Mr. LANARD. Senator, Ann Auerbach is also here.

Senator LAUTENBERG. I'm sorry that we didn't have a chance to hear from you. We welcome your organization's interest, and I am sorry that we don't have the time to hear your testimony today. We're going to have to ask you to submit a statement to the record.

A VOICE. We will submit it for the record for you.

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Senator LAUTENBERG. Thank you very much. Thank you very much, members of the panel.

We're going to hear now from the Governor of our State.

I'd like at this point to welcome the Honorable Thomas H. Kean, the Governor of our wonderful State. We have heard from Governor Kean before, his testimony was most helpful, and we invite him again to present his views.

Governor, welcome, you are always welcome in this chamber as you are before our committee.

Governor KEAN. I hope so. I'm an alumni.

Senator LAUTENBERG. Governor, we've heard from several people this morning and you know that Chairman Robert Stafford of the Environment and Public Works Committee was gracious enough to come to New Jersey for the only public field hearing in connection with the Superfund legislation. He believes that New Jersey is a State that represents the universal view of so many. We have here a combination of industry and individual concerns, which we must place above that of anything else. We must work together to solve our environmental problems. New Jersey has been very progressive in the kinds of programs that we have, thanks to you and your colleagues and we welcome the Commissioner of the Department of Environmental Protection, who is here with you, Governor.

Without further delay, we ask for your testimony.

STATEMENT OF HON. THOMAS H. KEAN, GOVERNOR, STATE OF NEW JERSEY

Governor KEAN. Thank you very much, Senator Lautenberg. I'd like to start off by commending you because I know that while Senator Stafford was gracious, and while I was delighted to have an opportunity to greet him this morning in the Statehouse, I know it was your effort which got him and this committee to New Jersey to see the problem firsthand and to talk to our people. So, I'd like to commend you for that effort, on behalf of the citizens of the State of New Jersey. It's appropriate that the committee has chosen New Jersey as a site of this field hearing. Everybody knows that New Jersey has more experience than practically any other State in dealing with hazardous waste disposal, partly because of the aggressive effort made by the Department of Environmental Protection, under the leadership of Bob Hughey. We have more sites on the current Superfund national priority list than any other State. We are a State with a thriving chemical industry. We are a State that has directly faced the problem of chemical waste disposal. We are a State with public concern about hazardous wastes. We are a State that has worked actively both alone and in concert with the Federal Government to clean up those sites at which hazardous wastes have been disposed of improperly. In short, it can be truly said that New Jersey is a national leader in the field of hazardous waste management. That's why I'm so impressed that the committee has come here to hear first hand about our experience and our needs in dealing with this critical problem in the future.

I recognize the time constraints, but I'm glad you were able to pay some of the actual sites a visit and see exactly, as you and I and Senator Bradley have done before, what those sites are like and how devastating that problem really is. The large scope of the cleanup and the fate of many residents are cause for acute concern. Although I'm proud of New Jersey's leadership on this issue I would like to emphasize one point. This is not a New Jersey issue per se, this is a national issue. It affects residents of every single state in this country. There is not a State in this country that is not going to have a major hazardous waste site that it must worry about cleaning up, and most of them are going to have a good number to worry about. Let undressed, it could affect the drinking water of millions, absolutely millions of our fellow citizens in this country. Some States may not yet know as much about their problem as we do in the State of New Jersey. As they all find out, and as sites which are now undiscovered throughout the country become identified, many of our colleagues who may not be as concerned as we are at the moment about this problem will become more and more concerned. That is what makes your immediate action so imperative.

When I testified before you last month in Washington, I addressed a number of significant legislative changes in the current Superfund law, which we believe can make Superfund even more effective. I'm not going to take the committee's time by repeating that testimony today. I have submitted a written statement for the record, which reemphasizes a number of these points.

I would like, however, to restate on the strongest possible terms the central theme of the testimony I delivered then, and that is the Superfund must be reauthorized and the Superfund must be reauthorized now. I've stated that I believe the size of the fund available to address the problem of hazardous waste sites has to be increased by at least $1.8 billion per year for a period of 5 years. That comes to a total of $9 billion. Let me stress in my view that that is a bare minimum. That is the starting point. I would note that the recent Superfund task report which came out after I and other Governors of this Nation had developed our recommendations said that the total cost of the cleanup job is between $8.4 billion and $16 billion.

Let me give you some examples. In Federal fiscal year 1985, New Jersey's management plan calls for activity on 69 separate major sites. This will involve 144 separate design engineering or construction projects at a cost of $108 million in Federal dollars. Fiscal year 1986 we're going to require $123 million just to keep this program moving. Translating these number in the State fiscal years, we need $98 million in fiscal year 1985 and $157 million in fiscal year 1986.

We're got a graph which I brought along with us depicting the shortfall without reauthorization or any kind of a credit. What this shows here are the years down at the bottom, and this shows the gap that will exist. And the gap, of course, is significant. Here we are in 1984, and you see how wide this gap will become in the years to come. This final chart shows our plans as of now. We can do something quite incredible now because of our commitment in New Jersey. We can take the funds from our spill fund the funds

from our bond funds, and I'm going to require a relative small percentage from Superfund next year. We believe because of our commitment we may be the only State in the country in that position.

Senator LAUTENBERG. I think that's true.

Governor KEAN. Look what happens without reauthorization even to us. Look at that deficit. What it does is slow down the program and stop the program. And that's why it's so absolutely essential that this reauthorization be done this year. We're going to make copies of this chart if you want to take it for any of your colleagues.

Senator LAUTENBERG. I'd like to have it.

Governor KEAN. It does show dramatically what the problem is. And it will show to some of your colleagues what the State's commitment is.

Senator LAUTENBERG. Governor, I can tell you we all listened very carefully to your testimony in Washington. You left my colleagues on the Senate Environment and Public Works Committee feeling that New Jersey has been in the forefront of toxic waste cleanup. If New Jersey's condition after 1985 will be as you describe, I can only expect that our States will be in much worse shape. This doesn't offer us much consolation, but it does dramatize the point very well.

Governor KEAN. We also need, as you know, a cost credit amendment, which you and Senator Bradley have sponsored. This will be very, very important to us to allow us to use our own resources. And if we use them on Superfund sites, to get credit for them at a later time so that we can move ahead. So that we can do this cleanup and keep going on. We don't want to be penalized for moving ahead on hazardous waste sites. New Jersey is willing to put up its own money, in other words, to keep the cleanup program moving ahead. There are those who tell you or may have already told you that New Jersey or other States won't be able to fully obligate the money set aside for this year. In our case that's approximately $40 million. Obviously, I'm pretty sure we wouldn't. In the first three quarters of fiscal year 1984, we have met every target or exceeded every target in our management plan. All of the studies, all of the designs, all of the remedial work, that was to have begun in fiscal 1984 thus far is underway. Engineering, design, feasibility studies, and other steps are complex. We're faced with hazardous waste cleanups in areas in which it will take more than days and weeks to finish the cleanup. It will be a matter of years. Therefore, it's simply inevitable that the needs we have identified will require funds in fiscal 1985.

These charts and graphs I hope demonstrate what I've been saying. Without a reauthorization, and a cost credit amendment, we're in deep trouble. More importantly, our environment, and the health of our citizens, will be unnecessarily jeopardized. In good conscience, I don't think any of us could permit that. We have made some suggestions now, which I shall not detail to you now because they were in my original testimony.

New Jersey is, in fact, the only State having a comprehensive cleanup strategy at this point. It provides the ingredients for a successful long-term cleanup program. Moreover, it provides a clear understanding of where we are going and what the complications

are that we face. It lists objectives, forces us to lay out realistic time frames to clean up each site over a period of 4 to 6 years. We believe it can provide a model for use by the rest of the Nation. It's not easy to defend the fact that a particular site may be scheduled for action in 1986. That is an acceptable price to pay for direction and for predictability. Real programs don't survive long in a world of could-have's, should-have's, and would-have's. No matter how convenient a target, we do have a real program and it's a doable, real world undertaking.

In conclusion, you are undoubtedly aware of the alarm that the presence of hazardous waste sites has caused New Jersey and other States. I hope that alarm will help spur the Congress, help spur the President of this Nation, into action. And I hope that we can, therefore, get this fund authorized this year. I'm very, very glad that you have taken the trouble to bring this committee here to the State of New Jersey to learn more about the problem, and about what's being done in this State to address it. But I and the citizens of this State, and I believe the citizens of this country, will be more grateful if Congress can reauthorize the Superfund immediately. I sincerely hope that will be the action that you will take this year. Thank you very, very much for permitting me to give my view.

Senator LAUTENBERG. I thank you, Governor Kean, for your forthrightness on this issue. You did make your points very well in front of the full committee and the fact that you're here again today shows your interest in solving this problem. We had our colleagues from the Congress and from the State legislature here earlier, and each one has actively taken part. Senator Stafford, the chairman of the committee, who is absolutely bipartisan on environmental matters, was also here. He's the man who really feels we have an obligation to clean up the environment. I knew that you'd be pleased, Governor Kean, if he came personally to our State. He reported that we could have legislation in the committee, and perhaps on the floor, by this fall. He thought that the bill proposed in the House and our legislation would share the same goals and objectives, that is, to reauthorize the fund, to have the fund expended at decent levels, and, to reauthorize it this year so that proper planning can take place. How can we wait until 1985 to reauthorize when so much planning is required? You said that in your own testimony. We may not be able to do everything, but we'd like to do what we can expeditiously. We don't want delays of years. A delay of weeks or even days is unacceptable, certainly, when it's your own family and you see your youngsters being affected by this contamination. You want nothing more than to get on with it. And Senator Stafford made it very clear that he would support increased funding, that he would support reauthorization in this year, 1984. It was out of respect, very frankly, Governor, to yourself, as well as the interest. Bill Bradley and I have taken in the Superfund reauthorization, so that we were honored with Senator Stafford's presence with us for the better part of the day.

Pollution, contamination, is not a New Jersey problem alonely a long shot. We have more of it because we have more people and more industrial activity. The same problem on a per capita basis may exist in Wyoming or Montana, or in the more isolated States

in our country, but the problems are more obvious here. That is why Senator Stafford came here. Those who testified earlier, don't relent, don't let anybody still the voices of protest, and don't be persuaded that your pleas or your cries are not being heard. They're being heard, perhaps not rapidly enough, and I join in your concerns, but this is all part of a campaign. It is part of an organized response to complacency. We can't accept complacency in our society, and we won't accept it in the State of New Jersey.

Governor, I won't keep you. I would urge, if you can, to direct people on your staff to review the testimony that has been given here today. The witnesses have differences of view on how we fund some of these projects. They have differences of view on whether or not we can use the funds appropriately. I profoundly disagree with the point of view that we can't use all funds available. We can use a great increase in funds. We can use them skillfully and effectively, and we must use them promptly. The task is one of urgency. When you have someone lying on the ground who needs oxygen, you don't ask him how much the oxygen costs, you supply it, and you think about the cost and other problems later on. I would rather get on with it. There were many excellent suggestions made by the witnesses here today. I'm sure that if you haven't heard them personally, you've heard about them; but I would again urge that you and your staff take a look at the testimony so that you can have the benefit of their views and recommendations.

I would ask, also, Governor, that you do all that you can to help people replace contaminated water supplies. Some of our citizens have been penalized beyond what's reasonable. They have had the pain and sacrifice of family members suffering terrible illnesses, death in some cases, and then after having gone through all of that, they're burdened with the financial responsibility of continuing to try to support the other members of the family, to lead a reasonable life, and to have to buy drinking water. In our society it's criminal that someone has to buy drinking water living in an urbanized part of our country, and I would urge you, Governor, that if you can get your people in the appropriate departments to try to alleviate the problem as much as they can, that would be very helpful. It is not that there has been no help given, but it's very difficult when someone has to pay $100 or $200 a month for drinking water, and continue to have to risk showering in contaminated household water. This point is made clearly in instructions given by the Department of Health on how to take a shower in benzene-tainted water; don't make the water too hot because it aerates; open the windows; close the windows when you're finished to keep the odors and danger risks from permeating the rest of the house. It's terrible. None of our citizens should have to live like this. I'm sure you agree with me and I thank you very much, Governor, for the opportunity to visit with you in your own capitol in New Jersey. For me it's a treat always to be in New Jersey no matter what. As I look at toxic waste sites and at the landfills, I see that New Jersey is a State that tends to its problems and tries not to forget any of the citizens. Whatever the cost, we must protect our citizens. This is a goal that certainly I feel good about working with you on.

Governor KEAN. Senator, I absolutely have no problem working with you on this one, which is now capable of solution by good men and women working together. The fact that you brought this committee here today is a strong step in the solution to this particular problem, and I thank you.

Senator LAUTENBERG. Thank you very much. We'll excuse you, Governor.

We have two more witnesses who will be very brief.

The first witness is John Czernikowski whom I knew as mayor, and second is the director of the Hazardous Waste Task Force at PJP landfill in Jersey City, Earl Aldridge. I would urge that you keep your testimony brief. We invite you to submit written statements.

STATEMENT OF JOHN CZERNIKOWSKI, FORMER MAYOR, SAYREVILLE, NJ

Mr. CZERNIKOWSKI. Good afternoon, Senator, and I feel very timid speaking after the Governor, such an elite group that testified here before you. My name is John Czernikowski. I am the former mayor of Sayreville, special assistant to the speaker Alan Karcher. As a mayor of the community that has been among the most heavily affected by toxic industrial waste dumping I appeal to you and to your committee to reauthorize Superfund and to make it permanent. It would take a long time for me to recite the litany of incidents of hazardous waste discovered over the years at dump sites in our borough. But I will tell you of one. Only last week deadly myrex was discovered and confirmed by DEP on a private property and our 34,000 residents have not yet been assured that leaching of this deadly chemical has not affected our drinking water or health. As a special assistant to speaker Alan Karcher, I would remind you on his behalf that the outlook for total cleanup is not good. The simple fact is this. Every day in New Jersey more hazardous waste is being produced, dumps dumped, discovered, then it's being cleaned up. Every day we wait. The waste spreads closer to home and closer to water supplies. Every day more waste is improperly and illegally dumped. Every day the cost of cleanup increases. On this issue standing still means losing ground.

This is just not the biggest health problem we face. It is an economic development problem as well. Who will want to move to New Jersey business in 10 years if the environment and large portions of the State is unsafe. Who will want to move here if the water can turn bad at anytime and property values disappear with discovery of toxic waste dumps in residential neighborhoods? What we need is the largest, the most comprehensive, planning, construction, cleanup, cleanup program in the history of the State. New Jersey needs more than $1 billion of additional money over the next 10 years to finance it.

At this time I will on behalf of Alan Karcher and the borough of Sayreville, small people like myself, to thank you and your committee to come and hear our gripes and complaints and thank you very much.

Senator LAUTENBERG. If am delighted to have you here, John. As former mayor you know more directly, perhaps than any other

elected official, how serious the problem is. You see the faces in our communities, and we do welcome your testimony. I'm sorry we don't have more time to chat, but we'll have to get on with the next witness. Thank you very much.

Mr. Aldridge.

STATEMENT OF EARL ALDRIDGE, DIRECTOR, HAZARDOUS WASTE TASK FORCE, PJP LANDFILL

Mr. ALDRIDGE. I'll be very, very brief, Senator.

What you're looking at is some of the early photos of PJP when the Jersey City Hazardous Task Force started its investigation to get PJP on the Superfund list. These are the current ones, and I will make these available and show them myself and narrate them if you want to the entire committee if you tell me a date and time.

First thing I want to say to you and to the committee is that I want to see Superfund reauthorized as a permanent item.

Second thing, I would like to see the Congress of the United States to come up with some funding for local programs like the Jersey City program which in our example would run this year if we can run the program fully, not just the one-person program as it's run now. We would need $71,233.21.

Senator LAUTENBERG. About.

Mr. ALDRIDGE. And starting next year we could run the program on less than $40,000 a year. That is less than most committees of the Senate spend on coffee a year.

Senator LAUTENBERG. I can't argue with that. I don't know what the coffee costs are.

Mr. ALDRIDGE. In other words, that's the main thing is I want to see Superfund reauthorized permanent and the Federal Government come up with some way of funding of the local programs like Jersey City's as we need the funding in order to intensify our program. And if the committee would keep like a copy of my entire file on PJP, I will make a copy and send it to you, Senator.

Sernator LAUTENBERG. I appreciate it very much, Mr. Aldridge. This morning, I flew with Senator Stafford over the PJP landfill site. He was shocked, to say the least, that this fire has been continually burning as it has been for a number of years. How many years?

Mr. ALDRIDGE. I can certify of daily inspections by myself since 1980, 4 years.

Senator LAUTENBERG. Four years out of the last ten?

Mr. ALDRIDGE. Four continuous every day. I inspect it daily. Has not stopped burning. In flying over you do not see the problem. Those will show you what the place looks like now. And I will——

Senator LAUTENBERG. I live in North Jersey, and use the Skyway. I'm familiar with so much of this area. It's a serious problem, and I'm glad to see that you are engaged in a program to help contain it at the local level. I'm shocked when I hear testimony by people, by firefighters, who have a tough enough job with inadequate pay and other problems. But they are also being asked to go into fires without knowing what they face, improperly equipped, equipment melting as the chemical reaction sets in, disintegrating before their eyes, always responding to the bell like the old fire

horse. I don't think it's fair and we must help in whichever way we can.

Mr. ALDRIDGE. That is the thing we need most in Jersey City right now is funding to expand the program where we can protect the children of Jersey City from the hazardous toxic waste and all we're asking for in funding is less than $72,000 a year.

Senator LAUTENBERG. Certainly we'll take a look at it. I heard what you said about the coffee. I think I pay my share in coffee costs, but seriously we'll take a look at that. There are many issues under the reauthorization that we have to consider.

You said the main thing is to get it reauthorized, get it expanded. Let's get on with the job, then we'll be able to fill in the parts as we go along. I thank you, Earl, for joining us today. I would ask now if we can have a couple of people up here who I would like to question further.

Barbara, come on up here for a second. Is Mr. Adams or Mr. McCarthy here? Thanks, Mr. Aldridge. We appreciate it.

I would also like to make mention of the fact that the Asbury Park Press ran a special issue called "Troubled Waters." It was an excellent overview of ground water problems and an important impetus to our holding this hearing on hazardous waste and ground water contamination. It is the responsibility of the journals in our State to continue to highlight these problems. They do a public service for all of us.

Barbara, one question. Your testimony was terrific, you packed in more words per square minute than anybody else, but it was sensible and it was heartfelt, and you really did us all a great favor.

You heard, and I don't want to get into a debate where two people are not facing one another, but I do want to ask for your comment on two things that we heard from industry, if you feel qualified to do so.

One, can we use these funds effectively and quickly enough? On the public side, you testified about the importance of citizen participation which puts this question in perspective?

Ms. VECCHIARELLI. As far as citizens participation at Burnt Fly Bog, we have a citizens advisory committee that was put together mainly because Superfund, that was part of Superfund criteria, that they should be citizens participation at Superfund sites. We were supposed to set a precedent for the rest of the State. To date we are the only advisory committee with the DEP that is here; and I think it's extremely important that at each Superfund site that is going to be worked on with the DEP that citizens advisory committees be set up. It was part of the Superfund criteria, but that Superfund has changed so much over the last years, they have added new criteria, taken criteria away, changed it all around, that's why I said it hasn't worked at all.

As far as chemical companies, the only one I thought qualified to say is that they generate the waste and it's their responsibility to get rid of it. And with our understanding, citizens understanding, also, that we benefit from technology which generates the waste. It's like a catch-22. But they are sophisticated, what they're doing they're generating it, making a lot of money off of it, and selling it to us so, therefore, they're responsible to get rid of the waste.

Senator LAUTENBERG. As I said, it's not fair to ask for a response when others are not here to offer their views as well. I would say that somehow or other we have to find sensible ways to fund this program; and to fund it at the level that we discussed this morning, that $9 billion level, at a minimum. We're going to try very hard to get that. Your participation as a member of the community, as a member of the town council, if I'm not mistaken, is invaluable. Again, I would urge you to keep the pressure up. I don't see you backing off anyway and I hope you don't. I thank you very much for being here with us.

Ms. VECCHIARELLI. Thank you very much.

Senator LAUTENBERG. This concludes our hearing. We'll be reporting back to you in the near future.

[Whereupon at 3:45 p.m. the hearing was adjourned.]

[Statements submitted for the record follow:]

TESTIMONY OF

THE HONORABLE JAMES J. FLORIO

MR. CHAIRMAN, SENATOR LAUTENBERG, AND OTHER MEMBERS OF THE COMMITTEE, I APPRECIATE THE OPPORTUNITY TO APPEAR BEFORE YOU TODAY AS YOU CONTINUE YOUR HEARINGS ON THE SUPERFUND PROGRAM. I COMMEND YOU FOR YOUR COMMITMENT TO PURSUING THE REAUTHORIZATION PROCESS DURING THIS SESSION OF THE CONGRESS AND I WISH TO THANK YOU FOR SELECTING NEW JERSEY AS THE SITE OF THIS FIELD HEARING. NEW JERSEY'S EXPERIENCE IN DEALING WITH THE TOUGH AND ENDURING PROBLEMS CAUSED BY HAZARDOUS WASTES SHOULD MAKE A SUBSTANTIAL CONTRIBUTION TO THE RECORD THE COMMITTEE IS NOW COMPILING CONCERNING THE EFFECTIVENESS OF THE SUPERFUND PROGRAM.

I KNOW THAT MEMBERS OF THIS COMMITTEE HAVE FOLLOWED WITH INTEREST THE PARALLEL PROCESS TO REAUTHORIZE SUPERFUND WHICH WE HAVE BEEN PURSUING ON THE HOUSE SIDE AND I THOUGHT I WOULD BEGIN MY TESTIMONY TODAY WITH A BRIEF REPORT ON THE STATUS OF THOSE EFFORTS.

A FEW WEEKS AGO, I INTRODUCED A NEW AND COMPREHENSIVE BILL TO EXTEND AND EXPAND THE SUPERFUND PROGRAM. THE BILL, WHICH

ENJOYS A BROAD BASE OF SUPPORT THROUGHOUT THE HOUSE, HAS AS ITS PRIMARY CO-SPONSORS THE CHAIRMAN OF THE COMMERCE COMMITTEE, MR. DINGELL, AS WELL AS TWO IMPORTANT FELLOW MEMBERS OF NEW JERSEY'S CONGRESSIONAL DELEGATION, MR. HOWARD AND MR. ROE, WHO HAVE LONG PLAYED A LEADERSHIP ROLE IN WORKING TOWARD AN EFFECTIVE SUPERFUND PROGRAM.

LAST WEEK, THE SUBCOMMITTEE I CHAIR UNANIMOUSLY APPROVED THE BILL WITH MINOR, TECHNICAL AMENDMENTS AND VOTED TO REFER IT TO THE FULL COMMERCE COMMITTEE. WE EXPECT THE FULL COMMITTEE TO CONSIDER THE BILL IN THE NEAR FUTURE. FURTHER, THE SPEAKER OF THE HOUSE HAS PROMISED TO BRING IT TO THE FLOOR THIS SUMMER. GIVEN THIS CLEAR TIMETABLE, I AM CONFIDENT THAT THE HOUSE WILL ENACT FINAL SUPERFUND LEGISLATION THIS YEAR AND I CAN ONLY HOPE THAT WITH THIS COMMITTEE'S LEADERSHIP, THE SENATE WILL BE READY TO FOLLOW SUIT.

BEFORE HIGHLIGHTING SOME OF THE KEY ASPECTS OF THE BILL I HAVE INTRODUCED, LET ME SPEND JUST A MOMENT ON WHY I THINK IT IS SO VITAL THAT WE GUARANTEE THE FUTURE OF THIS CRUCIAL PROGRAM AS QUICKLY AS POSSIBLE. FUNDING AUTHORITY FOR THE SUPERFUND PROGRAM RUNS OUT

IN THE FALL OF 1985 AND THE ENVIRONMENTAL PROTECTION AGENCY HAS ALREADY PLANNED TO SPEND MOST OF THE MONEY LEFT IN THE TRUST FUND WHICH SUPPORTS THE PROGRAM. UNFORTUNATELY, THE AGENCY'S PROGRESS IN IMPLEMENTING THE LAW HAS BEEN SO TROUBLED AND SO SLOW THAT WHEN ALL THE MONEY IN THE CURRENT FUND IS USED UP, WE STILL WILL HAVE ONLY PAID FOR CLEAN UP AT FAR LESS THAN HALF OF THE 546 SITES NOW ON THE NATIONAL PRIORITIES LIST, AND THESE SITES IN TURN REPRESENT LESS THAN A QUARTER OF THE SITES WHICH EPA ESTIMATES WILL NEED A SUPERFUND CLEANUP IN THE FUTURE.

THE INADEQUACY OF THE CURRENT FUND TO FINISH THE JOB AND THE NEED TO EXTEND AND EXPAND THE PROGRAM ARE THEREFORE ACCEPTED FACTS BY ALL INVOLVED IN THE SUPERFUND DEBATE. BUT, OPPONENTS OF MY LEGISLATION HAVE ARGUED, WHAT IS THE RUSH? WHY CAN'T WE DELIBERATE AT OUR LEISURE AND ACT ONLY WHEN THE DEADLINE OF FALL 1985 IS ALMOST UPON US? IN FACT, THE ADMINISTRATION AS REPRESENTED BY EPA ADMINISTRATOR RUCKELSHAUS, HAS TAKEN THIS APPROACH, URGING US TO STUDY THE CONTOURS OF THE PROBLEM FOR AT LEAST ANOTHER YEAR BEFORE MOVING DECISIVELY TO RESCUE THIS FAILED PROGRAM.

ANY MANAGER OF ANY ENTERPRISE, LARGE OR SMALL, GOVERNMENT OR PRIVATE, KNOWS THAT A SIGNIFICANT EXPANSION OF AN ONGOING PROJECT TAKES ADVANCE PLANNING. UNDER THE BILL I HAVE INTRODUCED, WE WOULD EXPAND SUPERFUND FROM A TOTAL OF $1.6 BILLION TO A TOTAL OF $9 BILLION. THIS NEARLY SIXFOLD INCREASE IN THE FUND WILL MEAN A DRAMATIC REVISION OF PERSONNEL, MANAGEMENT AND LONG-TERM PLANNING AT EPA. WE LITERALLY DO NOT HAVE EVEN DAYS TO SPARE IN BEGINNING THE READJUSTMENT PROCESS WHICH WILL BE NECESSARY TO CONVERT SUPERFUND FROM A HALTING, CONFUSED, BASICALLY INEFFECTIVE BEGINNING EFFORT TO THE MAJOR, AMBITIOUS CLEANUP PROJECT WE KNOW IT MUST BECOME.

AS FOR CONTINUING TO STUDY THE PROBLEM AS MR. RUCKELSHAUS RECOMMENDS, I AM ABSOLUTELY CONFIDENT THAT THE INFORMATION WE HAVE COMPILED DURING FOUR DISAPPOINTING YEARS OF WATCHING THIS PROGRAM UNFOLD MORE THAN QUALIFY US TO SET IT ON A DIFFERENT FUTURE COURSE. THE SCOPE OF THE PROBLEM IS IMMENSE AND WE CANNOT AFFORD MONTHS, OR EVEN YEARS OF ADDITIONAL HAND-WRINGING AND DELAY.

I CAN ONLY HOPE THE COMMITTEE NOT ONLY SHARES MY OVERRIDING COMMITMENT TO FAST ACTION ON THIS VITAL LEGISLATION, BUT CAN

PERSUADE THE SENATE TO SIMILARLY PERCEIVE THE PRESSING URGENCY OF THE TASK.

BECAUSE THE PURPOSE OF A FIELD HEARING IS TO ENABLE THE COMMITTEE TO MORE CLOSELY GAUGE THE NEEDS OF THE COMMUNITIES AFFECTED BY A PROGRAM, I WILL FOCUS TODAY ON THE SPECIFIC ASPECTS OF THE BILL I HAVE INTRODUCED WHICH WILL OFFER BASIC AND BADLY NEEDED ASSISTANCE TO STATES LIKE NEW JERSEY WHICH FACE SUBSTANTIAL CLEANUP AGENDAS.

UNLIKE MANY OTHER FEDERAL ENVIRONMENTAL PROGRAMS, SUPERFUND HAS ALWAYS BEEN STRUCTURED AS A FEDERALLY FUNDED EFFORT, SUPPORTED PRIMARILY BY INDUSTRY TAXES ASSESSED AT THE NATIONAL LEVEL, WITH THE STATES ASSUMING ONLY A RELATIVELY SMALL PERCENTAGE OF TOTAL CLEANUP COSTS. THE FIRST THING MY BILL WOULD DO IS TO MAKE THIS FEDERAL PROMISE TO THE STATES A MEANINGFUL REALITY BY GUARANTEEING THAT WE HAVE ENOUGH MONEY IN THE SUPERFUND TO SUPPORT THE CLEANUP EFFORT. I MENTIONED EARLIER, THE BILL WOULD PROVIDE $9 BILLION IN FEDERAL FUNDING TO SHOULDER AND CONQUER THE CLEANUP BURDEN.

THE SECOND CONCERN MOST OFTEN EXPRESSED BY THE STATES IS THE INADEQUATE AND, AT TIMES, DESTRUCTIVE MANAGEMENT OF THE PROGRAM BY EPA. WHILE GRATEFUL FOR THE PROMISE OF FEDERAL FUNDING, STATES LIKE NEW JERSEY, NEW YORK, PENNSYLVANIA, MICHIGAN, FLORIDA AND CALIFORNIA -- ALL OF WHICH SHARE MAJOR WASTE SITE PROBLEMS -- HAVE BEEN DRIVEN TO THE POINT OF DESPERATE FRUSTRATION BY THE FEDERAL GOVERNMENT'S ERRATIC AND PAINFULLY SLOW IMPLEMENTATION OF THE LAW'S MANDATES.

THE BILL WE ARE CONSIDERING IN THE HOUSE WOULD ADDRESS THESE CONCERNS IN TWO WAYS. FIRST, IT WOULD PLACE EPA ON A STRICT SCHEDULE FOR CLEANUP ACTIONS, MANDATING, FOR EXAMPLE, THAT ACTUAL CLEANUP WORK BEGIN AT NO FEWER THAN 150 SITES EACH YEAR. SECOND, THE BILL WOULD GIVE THE AGENCY CLEAR DIRECTION CONCERNING THE CLEANUP STANDARDS WHICH SHOULD APPLY AT EACH SITE.

CURRENTLY, EPA DECIDES THE CRUCIAL QUESTION OF "HOW CLEAN IS CLEAN" ON AN AD HOC, SITE-BY-SITE BASIS. THIS CONFUSED, ARBITRARY DECISION-MAKING HAS LED MANY STATES TO FEAR THAT THE PROGRAM IS

RUN ON THE PRINCIPLE THAT THE SQUEAKIEST (BUT NOT NECESSARILY THE DIRTIEST) WHEEL GETS THE GREASE. BUREAUCRATIC AGGRESSIVENESS AND, AT TIMES, PLAIN POLITICS HAVE DETERMINED WHETHER A SITE GETS A CADILLAC OR A USED JALOPY LEVEL OF CLEANUP. IT IS CLEARLY OUR RESPONSIBILITY TO PUT AN END TO THIS CONFUSION AND ESTABLISH UNIFORM, MANDATORY NATIONAL CLEANUP STANDARDS FOR THE AGENCY AND THE STATES TO FOLLOW.

A THIRD, CLOSELY RELATED CONCERN WHICH IS OFTEN RAISED BY THE STATES IS THE IMPORTANT QUESTION OF WHO IS TO ASSUME RESPONSIBILITY FOR MAINTAINING SITES ONCE THEY HAVE BEEN CLEANED UP. MANY CLEANUPS INVOLVE THE CONTAINMENT OF THE HAZARDOUS WASTES AT THE SITE, RATHER THAN THEIR TOTAL REMOVAL FROM THE LOCATION WHERE THEY WERE DUMPED. RESIDENTS OF SURROUNDING COMMUNITIES ARE UNDERSTANDABLY WORRIED THAT NO ONE WILL MONITOR THE LONG-TERM EFFECTIVENESS OF THE REMEDY AND THAT THESE SITES WILL ONCE AGAIN BEGIN TO LEAK. UNDER CURRENT LAW, THE STATES ARE STUCK WITH TOTAL RESPONSIBILITY FOR SUCH LONG-TERM OPERATION AND MAINTENANCE. SUCH MAINTENANCE COSTS CAN BE QUITE SUBSTANTIAL. FOR EXAMPLE, IT IS ESTIMATED THAT LONG-TERM MAINTENANCE OF THE RECENT ATLANTIC CITY CLEANUP COULD RUN AS HIGH

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AS $1 MILLION A YEAR.

THE BILL WE ARE CONSIDERING IN THE HOUSE WOULD SHIFT 90 PER CENT OF SUCH LONG-TERM OPERATION AND MAINTENANCE COSTS TO THE FEDERAL GOVERNMENT, WITH THE STATES PICKING UP THE REMAINING 10 PER CENT SHARE. THIS 90/10 RATIO IS THE SAME AS THAT WHICH APPLIES TO BASIC CLEANUP AND THIS CHANGE WOULD COMPLETE THE BASIC FEDERAL COMMITMENT TO THE OVERALL EFFECTIVENESS OF THE SUPERFUND PROGRAM.

FINALLY, WE MUST ACKNOWLEDGE THAT MANY STATES ARE HAVING SUBSTANTIAL DIFFICULTY IN MEETING EVEN THEIR 10 PER CENT SHARE OF OBLIGATIONS FOR SUPERFUND CLEANUPS. STATE OFFICIALS ESTIMATE THAT ONE-THIRD OF THE STATES HAVE YET TO ENACT LAWS PROVIDING FUNDING FOR SUCH PROGRAMS. THEY ALSO TELL US THAT THE CURRENT LAW'S PREEMPTION OF STATE TAXING AUTHORITY FOR SUCH PROGRAMS HAS BEEN A MAJOR IMPEDIMENT TO MANY STATES, WHICH FEEL COMPELLED IN SOME CASES TO LOOK TO INCREASINGLY CONSTRICTED SOURCES OF GENERAL REVENUE FOR SUCH FUNDING.

THE BILL WE ARE CONSIDERING IN THE HOUSE WOULD RESOLVE THIS PROBLEM BY REPEALING THE PREEMPTION PROVISION IN CURRENT LAW. IF

WE EXPECT THE STATES TO ASSUME THEIR PLACE AS FULL PARTNERS IN THE SUPERFUND PROGRAM, WE MUST GIVE THEM MAXIMUM FLEXIBILITY IN PURSUING SUCH FUNDING REQUIREMENTS. THE BILL WOULD ALSO ALLOW THE STATES TO APPLY THE ADMINISTRATIVE COSTS OF RUNNING THEIR SUPERFUND PARTNERSHIP PROGRAMS TO THEIR 10 PER CENT MATCHING SHARE. IN THIS WAY, WE WILL GIVE THE STATES ADDITIONAL INCENTIVE TO JOIN THE FEDERAL GOVERNMENT AS FULL PARTNERS IN THE CLEANUP PROCESS.

IN CLOSING, I WOULD ONLY REITERATE, MR. CHAIRMAN, MY WISH THAT YOU AND I CAN ONCE AGAIN FORM A MORE IMMEDIATE, BUT EQUALLY IMPORTANT, PARTNERSHIP OF OUR OWN AND GUIDE THIS IMPORTANT LEGISLATION TO THE PRESIDENT'S DESK THIS FALL. THIS PROGRAM, ONCE SO FULL OF HOPE, HAS CLEARLY FOUNDERED. WE MUST GIVE IT A SECOND, AND A NEW, LEASE ON LIFE SO THAT IT CAN AT LAST MEET THE GOALS WE SET FOR IT SOME FOUR YEARS AGO.

THANK YOU.

TESTIMONY BY JOHN W. GASTON
DIRECTOR, DIVISION OF WATER RESOURCES
June 4, 1984

Senator Stafford, Senator Lautenberg, members of the committee and other distinguished guests, I appreciate the opportunity to address you and add our voice to that of Governor Kean and other witnesses seeking reauthorization of the Superfund Program.

The Division of Water Resources, within the New Jersey Department of Environmental Protection has been charged with the responsibility of protecting the waters of our State and insuring our citizens that they will have a sufficient and potable supply of drinking water. We perform this mission in many ways but one of the most important is in partnership with the Division of Waste Management which has the primary State responsibility for clean up of toxic waste sites, in particular, Superfund sites. This partnership has provided an effective weapon to detect and analyze toxic waste sites and in conjunction with the Federal Environmental Protection Agency it has been an active force in conducting remedial clean up studies and in initiating actual clean up operations.

My emphasis today will be on the absolute need to protect our ground water and to urge immediate reauthorization of the Superfund Program as a key element in helping us meet that obligation.

BACKGROUND

Ground water contamination in the State of New Jersey has of necessity received rigorous regulatory attention. The reasons are several fold. Approximately 50 percent of New Jersey's population and 80 percent of its area is dependent upon ground water. Population density is high and, despite its size, the State's geology is complex and highly variable, ranging from fractured shale and crystallines to cavernous limestone and coastal plain sediments. Compounding these conditions is an economy heavily dependent upon chemical and refining industries. The Department has estimated that between 10 and 15 thousand firms in New Jersey are engaged in the production of chemical and petrochemical products. New Jersey also generates about 8% of the nation's hazardous waste, the highest of any state. As an inevitable consequence, aquifer contamination has occurred in many locations through poor industrial housekeeping, spills and accidents of all types, deliberate dumping, illegal discharges, leaks from subsurface storage, landfills and so on.

Avenues for the release of contaminants are all too numerous. Contamination has had, moreover, decades of opportunity to reach the State's unconsolidated and bedrock aquifers. Contrary to public misconception, most of the pollution sources are at facilities which had some type of permit to operate. However, these earlier permits did not consider ground water an integral regulatory factor. Ironically, State and Federal laws passed in the 1970's inadvertently increased the quantity of pollutants discharged to the State's aquifers as Federal laws concentrated on "fishable and swimmable" goals for surface waters. To quote a predecessor of mine, "Waste will migrate to the area of least regulation." This certainly proved to be true in New Jersey as many surface discharges were replaced by percolation and evaporation lagoons, spray irrigation, and landfills which accepted chemical wastes. The growth of New Jersey's ground water pollution program has parralleled a rising public awareness of ground water and its possible contamination by toxic substances.

TOXICS IN GROUNDWATER

In 1975, the Governor issued an Executive Order directing that a concerted effort be made to investigate factors related to the high incidence of cancer in New Jersey. As a result of that Executive Order, DEP's Office of Cancer and Toxic Substances Research was created. (This office has been renamed the Office of Science and Research.) One of their primary tasks had been to measure concentrations of chemicals suspected of leading to an increased risk of cancer in humans. As part of that effort, an extensive data-based was developed on some chemicals occurring in ground water aquifers in the State. The report they issued summarizes data from the first two years of their ground water study and discusses sources and behavior of chemicals in ground water and some of the implications for human health. They looked for fifty chemicals, in three different groups in well water samples from throughout the State. These three chemical groups are halogenated volatile organics, chlorinated pesticides and related compounds, and metals. Their report summarizes data from 1118 samples taken from 670 wells. Although this is a significant sample size, it is a small portion of the potable wells in the State.

One or more of eight volatile organic compounds were found at concentrations above ten parts per billion in 16.6% of the wells tested. These eight chemicals include five (carbon tetrachloride, chloroform, dichlorethane, tetrachloroethylene, and trichloroethylene) for which evidence from animal tests establishes them as capable of causing cancer, and three others (trichlorethane, and the di and tri-chlorobenzenes)

chemically similary to known carcinogens, but for which there is no reliable evidence that they cause cancer. In 3.1% of the wells in the study, concentrations of one or more of these eight chemicals exceeded one hundred parts per billion. A clearly unacceptable level.

In the report is a hypothesis, based on analysis of the data, that low level concentrations of volatile organics may occur in wells subject to wide spread contamination by a variety of mechanisms including aerial transport and recharge from surface waters. In contrast, higher levels of contamination occur in a population of wells subject to direct and relatively nearby discharge of pollutants into the ground such as the Superfund sites.

Although more than 95% of the wells tested in the study can be considered acceptable for potable use, this is no cause for complacency. The fact that 3.1% of the wells had volatile organics above 100 parts per billion serves to confirm the vulnerability of ground water to contamination. It is imperative that everything possible be done to prevent or minimize entry of toxic chemicals into ground water.

Chlorinated pesticides and related compounds, when detected in the study, were usually at very low concentrations, and with a few specific exceptions, metals appear to present a less serious health problem that do the organic compounds in the State's ground waters.

Movement of water through underground aquifers is generally quite slow, usually measured in feet per year. On the one hand this means that there is time to deal with such cases in an orderly manner once they are discovered. On the other hand, such slow movement mitigates against the contaminant being flushed away and the problems solving itself. Moreover, because many contaminants tend to be retained by solid aquifer material, they tend to move even more slowly than the bulk flow of ground water itself. This appears to be the case for metals which undergo ion-exchange reactions and for pesticides which adsorb onto clay particles. the movement of the lower molecular weight volatile organics is less restricted and these chemicals thus spread more easily from a source of contamination. The relative ease of movement, resistence to breakdown, widespread use, and potential cancer causing effects combine to make the halogenated volatile organic compounds the greatest threat to New Jersey's ground waters. These of couse are the toxics primarily found at Superfund sites.

It is not possible at present to determine the actual degree of cancer risk to humans from ingestion of chemicals in drinking water. Estimates of risk have been made by extrapolating from animal data, but such estimates are subject to uncertain assumptions and statistical error. There is general agreement in the scientific community that compounds shown to cause cancer in animals present a cancer risk to people. It is also agreed that for such compounds there is no threshold level below which risk is absent.

New Jersey has taken the lead in addressing this area by the recent passage of major amendments to the "Safe Drinking Water Act." These amendments provide for the periodic testiny of all public water supplies and for the establishment of a Drinking Water Quality Institute which will be responsible for establishing maximum contaminant levels for over twenty organic compounds including all of those found in the study done by the Office of Science and Research.

THE MAGNITUDE OF CASES

When we talk about the potential for ground water contamination at Superfund sites we must put our program in perspective. The first organized effort to investigate ground water pollution in New Jersey began in 1974 with four geologists. Currently, there are twelve hydrogeologists and geophysicists dedicated to ground water contamination investigations.

A growing knowledge of ground water science, hazardous waste dumping, the implementation of the State Spill Fund and Superfund, sophisticated analytical techniques and other factors have generated an ever increasing caseload. In 1979 the ground water pollution program consisted of about 106 cases. That number climbed to 140 investigations by mid-1980 and 270 by early 1982. In January 1983, the active caseload reached 308 and by April of this year 322 cases were under investigation.

In 1983 we published the "New Jersey Ground Water Polllution Index" which listed over 500 ground water pollution incidents investigated by our Division over a 10 year period. Even that list was not complete but consisted primarily of those incidents which have had the most serious impact on ground water quality. For example, the index only includes a few of the hundreds of spills from ruptured gasoline and fuel oil tanks which contaminate ground water each year but have not spread to a potable well. However, the information used in developing the index has resulted in the closing of over 900 private wells and required treatment or the sealing of over 190 high-capacity industrial and public supply wells. Approximately 25% of the ground water pollution workload is Superfund cases. But more importantly, I want to emphasize that every Superfund case investigated so far has uncovered ground water contamination. When we recall the statistics that say almost 50 percent of New Jersey's population and 80 percent of its area is dependent upon ground water we realize the cloud that Superfund sites cast on all our public decisions about water.

Nearly 70% of the caseload we handle results from the effects of industrial solvents on ground water quality. Many thousands of these compounds are in everyday use throughout society, at home as well as in the workplace. The manufacture and use of these often toxic chemicals has increased exponentially since World War II. When contaminant sources are stopped and a decontamination program is recommended and finally installed, many years of expensive pumping and treatment are required to restore ground water quality. There presently are 43 industries performing ground water cleanups, but we must note that no major aquifer restoration program involving industrial solvents has yet reached shut-down concentrations.

PREVENTION THROUGH PERMITS

As we discuss ground water problems and the potential for future Superfund sites, I think it is critical to understand that the State of New Jersey has the most sophisticated and comprehensive ground water permit program in the United States. Unlike Federal law, New Jersey law requires that any discharge of waste into the ground, including non-hazardous waste, must obtain a permit and comply with water quality standards. This requirement protects the future use of the resource as well as controlling discharges.

In concept, Superfund and RCRA are complimentary acts. Superfund deals with problems produced by past activities and RCRA deals with existing facilities and seeks to prevent future Superfund cases. I raise this analogy because in the area of ground water monitoring requirements, New Jersey has demonstrated a significantly higher level of performance under the RCRA Program than any other State. Over 85% of our RCRA facilities are in compliance with federal regulations for ground water.

This performance is illustrative of the type of commitment New Jersey has made to implementing an agressive ground water protection program. In this respect, New Jersey is years ahead of most other States.

PRIVATE SECTOR CLEANUP INITIATIVE

Another major example of our commitment to remedy ground water contamination problems is our effort to initiate private cleanups of hazardous sites. This program predates both Superfund and the publicly funded hazardous waste cleanup programs instituted at the State level. These cleanups are accomplished through enforcement action and negotiations with culpable parties found responsible for pollution. Because this program has acquired much experience over the past years, it has matured into a highly successful complement to publicly funded cleanups.

Since the advent of Superfund, this program has been tailored to interface with, and essentially constitute a significant part of the Superfund process, and is an important link in our partnership with the Division of Waste Management and EPA. For example. the responsible party searches required under CERCLA have been conducted almost exclusively through our water

pollution investigations. More importantly, once the investigations have determined culpable parties, attempts are initiated to force a private cleanup in the time period prior to Superfund dollars becoming availabe for that site. This highly successful program has eliminated the necessity of placing many hazardous waste sites on the National Priority List, and has resulted in millions of dollars of public funds being preserved for other cleanups on the Superfund list.

As might be imagined, there are difficult negotiations which must take place leading to a private cleanup. This requires that personnel be equipped with as strong a negotiating hand as possible. One important incentive is the threat of liability for a publicly funded cleanup which is typically more expensive for a corporation than if the firm were to perform the work itself. Additionally, many larger firms are highly sensitive to their corporation's name appearing on the National Priority List. To continue this successful complementary program, we need the leverage the Superfund program provides at the negotiating table.

CONCLUSION

As we all know, the problem of cleaning up hazardous wastes in New Jersey is enormous; much too big for one program or one agency to deal with by itself. In our presentation, we have tried to indicate that we are a responsible State that is making every effort possible to do our share in cleaning up this nation's toxic waste. We ask you, the members of this important committee, to join with us in this task by making your best effort to see that the Superfund legislation is reauthorized now!

I thank you for allowing me to address you today.

New Jersey Environmental Lobby

Box 605, Teaneck, N. J. 07666

TESTIMONY OF THE

NEW JERSEY CAMPAIGN AGAINST TOXIC HAZARDS

ON

THE FEDERAL SUPERFUND

BEFORE THE

ENVIRONMENT AND PUBLIC WORKS COMMITTEE

OF THE

UNITED STATES SENATE

Presented by: James S. Lanard, Legislative Agent
N.J. Environmental Lobby

Hearing location: Trenton, New Jersey

Date: June 4, 1984

The New Jersey Campaign Against Toxic Hazards welcomes the opportunity to present its views concerning the reauthorization of the Superfund program. The New Jersey Campaign Against Toxic Hazards includes many of the major environmental, labor, community and citizen organizations in our state. One of the campaign's major goals is the reduction of human exposure to toxic chemicals which is to be achieved by the development of the following: meaningful and effective community participation programs; comprehensive legislative and regulatory mechanisms; and citizen oversight of the state and federal governments' environmental enforcement programs.

Our remarks are divided into two parts. First, a general overview of the problems we are experiencing in New Jersey as a result of the indiscriminate disposal of toxic chemicals will be presented. Then our recommendations for the key points which we think should be included in the Superfund program will be discussed.

1. The toxic chemical crisis in New Jersey

The public's view of the problem

We in New Jersey are very aware of the toxics crisis which confronts us. We are concerned that too little is being done on the federal and state level and are convinced that what is being done is proceeding at an inexcusably slow pace. We also find it intolerable

that we have been excluded from meaningfully participating in the clean up decisions which will affect our health and safety. Unfortunately we have learned not to count on government for our answers; we know that we must conduct our own investigations to determine whether decisions made without public input or review are really in our best interests. Yet the resources necessary for our decision making are also kept from us. Later in this testimony remedies to these problems will be proposed.

Pollution in New Jersey

According to various published reports in our state more than 500 wells supplying drinking water have been shut down in New Jersey during the past ten years. As many as 250,000 people have been affected by this situation alone. A report published by the state's Department of Environmental Protection (DEP) indicates that almost 17% of a large, randomly selected sample of wells have been contaminated with toxic organic chemicals. The current DEP Commissioner, Robert Hughey, stated recently that there are at least 1,100 potential toxic dump sites in New Jersey; at the state's current level of effort, initial investigations of these potential sites will not even be completed for another two years. Moreover, the 1,100 figure is in addition to the 100 Superfund sites already identified in New Jersey. Apparently the severity of industrial-related pollution problems are not improving. For example, in 1983, the DEP almost doubled the

amount of penalties levied (as compared to 1982) for water discharge violations and the DEP stated: "increase indicates greater groundwater emphasis where more serious problems have occurred." (DEP letter to Assemblyman Steven Adubato, Jr., April 10, 1984.) The DEP also stated that "in about 85% of the cases (concerning investigations of facilities which generate, treat, store or dispose of hazardous wastes), violations of the waste management or other applicable statutes were found." (DEP letter to Adubato.) The latest financial forecast for cleaning up New Jersey's toxic dump sites, according to Commissioner Hughey's own estimates, is a minimum of two billion dollars. Our proposed changes in the Superfund law will address most, if not all, of these problems.

2. Proposed amendments to the Superfund

We urge this Committee to recommend reauthorization of the Superfund during 1984 at a level that will raise a minimum of fifteen billion dollars in the next five years. Reauthorization is necessary now so that Superfund monies will not run out and so that there will not be an interruption of the clean up efforts.

The funding mechanism should be made permanent.

We support the continuation of the feedstock-based tax for the

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Superfund's core funding needs--and the tax should be made permanent due to the severity of the problems. While it is true that only 43 feedstock chemicals are taxed, the EPA's reports indicate that 41 of the 50 most frequently identified wastes and substances at National Priority List (NPL) Superfund sites are feedstocks or their derivatives. The current Superfund tax structure has worked remarkably well; before a new tax structure is adopted it must be unequivocally proven to be as effective as what is in place now. Finally, the issue of federal preemption should be resolved with a provision allowing states to adopt their own "Superfund" law.

Additional feedstock chemicals should be taxed.

The list of forty three feedstock chemicals which comprise the taxable base for the Superfund should be expanded. We propose the inclusion of mining wastes, gasoline additives, lead, copper, asbestos and zinc at a minimum since these chemicals are being identified at waste sites throughout the country.

An experimental waste end tax might be considered.

While not at all convinced that a waste end tax can work, we are not opposed to the inclusion of a waste end tax on an experimental basis. We do believe, however, that the revenues from this tax should

not be used as part of the actual clean up effort. That is, the feedstock tax revenues must be sufficient to insure adequate clean up--with the waste end tax revenues put to other uses. For example, waste end tax revenues might be used for low interest loans to industries adopting technologies to reduce the volume and toxicity of waste generation. State and federal agencies might also be able to apply for grants to research waste related problems.

Our objections to the waste end tax are simple. It has been widely reported that state waste end taxes have not worked. These taxes are hard to collect and there is no evidence that better waste end management will result.

Long term operation and maintenance costs should be paid for by the Superfund.

We strongly endorse the recent proposal by Senator Lautenberg and Senator Bradley which would allow Superfund revenues to be used for 90% of the long term operation and maintenance (O&M) of "cleaned up" sites. Without such a provision, EPA's incentive to approve cheap short term "clean ups" will continue--thereby allowing EPA to pass off the more expensive long term O&M costs to the states. By requiring Superfund revenues to pay for O&M, the EPA will be forced to consider the overall solution (i.e. detoxification and decontamination) from

the beginning--and should insure cleaner sites and more cost effective efforts. Futhermore, standards which define adequate clean up (how clean is clean?) must be adopted and could be based on existing federal provisions (such as those in the Clean Water Act and the Clean Air Act) as well as others based on background concentrations.

A mandatory clean up schedule should be enacted.

EPA's frustratingly slow time line--if one exists at all--must be speeded up. A legislative mandate identifying specific milestones is necessary to insure timely clean ups. We suggest the following:

1. All preliminary assessments should be completed for sites identified by the Emergency and Remedial Response Information System no later than January 1, 1987.

2. The National Priority List should be expanded to 1,600 sites by January 1, 1988.

3. Remedial Investigations and Feasibility Studies should begin within six months of listing on the NPL except for the current NPL sites--for which studies must be completed within 18 months of the

Superfund's reauthorization.

4. Require at least 150 new remedial actions to begin each year.

Toxic Waste-related industries must be financially responsible for their damages.

Strict, joint and several liability provisions should be specifically written into the law to eliminate further legal challenges. Furthermore, the post-closure liability transfer provision should be eliminated. Adoption of these suggestions will serve to place costs of waste generation and disposal on the responsible parties--and not on the general public.

Compensation for victims of waste-related chemical exposure should be included.

The clean up of toxic wastes is divided into two separate categories. One, which we have discussed at length today, is the removal of toxic wastes from our environment. The other, and one which is just as important, is the removal of toxic wastes from our bodies. Toxic chemicals wreak havoc on the human body. Currently, due to very stiff burdens of proof imposed by our judicial system,

victims of chemical exposure rarely are compensated for the diseases, illnesses and related costs caused by these chemicals. The Superfund bill should be a comprehensive one; it should address both the environmental and public health related problems. Innocent citizens should no longer have to pay their own medical expenses and they should be paid for their lost wages due to hospitalization and disabilities caused by toxic wastes. In addition, relocation expenses, when appropriate, should be compensated by the Superfund bill. We strongly urge the Committee to include a broad and liberal victims compensation provision in the Superfund bill.

Extensive public participation provisions must be adopted.

As was said in the introduction to our testimony, the public has been intentionally excluded from participating in the waste clean up decision making process. The EPA and frequently even state opposition to public involvement needs to be changed legislatively since our efforts to join in the process have been rebuffed so often. Citizens should be given the right to petition the EPA to include a specific site on the NPL. The EPA must be required to explain why a decision to reject the petition was made. In addition, the adoption of a clean up plan must be preceeded by full and comprehensive participation by the affected community--and its citizens. This may mean providing community groups with technical assistance so they will be able to

provide informed comments and suggestions on a potential clean up plan. Citizens should also be given the right to sue both the private corporations and governmental agencies which are alleged to be in violation of any provision of the Superfund law. Expert witness and attorney fees also should be allowed. A strong emergency relief provision should be enacted that would provide citizens the right to petition the government to conduct health surveys and related health effects studies. Moreover, citizens rights must include the ability to seek abatement of toxic waste-related risks including provisions for alternative drinking water supplies to affected communities (to be paid for by the fund).

Without effective public participation provisions, less than adequate clean up plans will be adopted, protection of the public's health will not be guaranteed, and the toxics crisis will continue. But with meaningful public participation, better plans will be adopted, oversight of industry and governmental efforts will occurr, and the crisis should be abated--and future problems may even be prevented.

* * * * * * *

The New Jersey Campaign Against Toxic Hazards appreciates the Committee's willingness to convene a Superfund hearing in New Jersey.

Obviously our problems here are very serious. We know, however, through close contact with our colleagues and friends and families who live in other states that our problems are not unique. Unfortunately, they are experienced all over. In fact, the testimony offered by community and environmental groups here would have been replicated anywhere that this hearing had been held. We hope when the Committee considers the reauthorization of the Superfund that you think of New Jersey as representative of a national crisis--and one that is not simply related to our state alone. With that perspective in mind, we are confident that you will recommend a comprehensive and strong Superfund bill. Thank you.

TESTIMONY OF

THE HONORABLE THOMAS H. KEAN

GOVERNOR OF THE STATE OF NEW JERSEY

BEFORE THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

TRENTON, NEW JERSEY

JUNE 4, 1984

I. INTRODUCTION

GOOD AFTERNOON, CHAIRMAN STAFFRORD, SENATOR BRADLEY, SENATOR LAUTENBERG, MEMBERS OF THE COMMITTEE. I AM PLEASED TO WELCOME THE SENATE COMMMITTEE ON ENVIRONMENT AND PUBLIC WORKS TO NEW JERSEY FOR THIS HEARING ON THE ISSUE OF HAZARDOUS WASTE CLEANUP AND, MORE PARTICULARLY, ON THE VITAL QUESTION OF WHETHER OR NOT THE NATIONAL SUPERFUND LAW SHOULD BE REAUTHORIZED.

IT IS PARTICULARLY APPROPRIATE THAT YOU HAVE CHOSEN NEW JERSEY AS THE SITE OF THIS FIELD HEARING. AS ALL OF YOU KNOW, NEW JERSEY HAS HAD MORE EXPERIENCE THAN VIRTUALLY ANY OTHER STATE IN DEALING WITH THE QUESTION OF HAZARDOUS WASTE DISPOSAL. IN PART BECAUSE OF THE AGGRESSIVE EFFORT MADE BY OUR DEPARTMENT OF ENVIRONMENTAL PROTECTION, WHICH IS REPRESENTED HERE TODAY WITH ME, WE HAVE MORE SITES ON THE CURRENT SUPERFUND NATIONAL PRIORITY LIST THAN ANY OTHER STATE.

WE ARE A STATE HAS A THRIVING AND IMPORTANT CHEMICAL INDUSTRY. WE ARE A STATE THAT HAS DIRECTLY FACED THE PROBLEM OF CHEMICAL WASTE DISPOSAL. WE ARE A STATE IN WHICH PUBLIC CONCERN ABOUT HAZARDOUS WASTE IS VERY HIGH, PRECISELY BECAUSE WE HAVE NOT BEEN AFRAID TO FACE THIS PROBLEM. AND WE ARE A STATE WHICH HAS WORKED ACTIVELY, BOTH ALONE AND IN CONCERT WITH THE FEDERAL GOVERNMENT, TO CLEAN UP THOSE SITES AT WHICH HAZARDOUS WASTES HAVE BEEN DISPOSED OF IMPROPERLY.

IN SHORT, IT CAN TRULY BE SAID THAT NEW JERSEY IS THE NATIONAL LEADER IN THE FIELD OF HAZARDOUS WASTE MANAGEMENT.

THAT IS WHY I AM PARTICULARLY IMPRESSED THAT THE COMMITTEE HAS CHOSEN TO COME HERE TO HEAR FIRST HAND ABOUT OUR EXPERIENCE, AND OUR NEEDS, IN DEALING WITH THIS CRITICAL PROBLEM.

I COMMEND THE COMMITTEE FOR TAKING THE TIME TO VISIT AN ACTUAL SITE HERE IN NEW JERSEY. IN FACT, ALTHOUGH I RECOGNIZE THAT THE TIME CONSTRAINTS OF THE COMMITTEE ARE GREAT, I WOULD EVEN RECOMMEND THAT THE MEMBERS TAKE THE OPPORTUNITY OF THIS TRIP TO PAY A FIRST HAND VISIT TO SOME OF THE OTHER MAJOR SITES IN NEW JERSEY, AS SENATOR LAUTENBERG, SENATOR BRADLEY, AND I HAVE DONE ON OTHER OCCASIONS. IT IS THERE THAT YOU CAN GET THE BEST SENSE OF HOW COMPLICATED -- AND HOW DEVASTATING -- THE PROBLEM REALLY IS; HOW LARGE THE SCOPE OF THE CLEANUP; HOW ACUTE THE CONCERN AND THE FEAR OF THE RESIDENTS NEARBY.

ALTHOUGH I AM PROUD OF NEW JERSEY'S LEADERSHIP ON THIS ISSUE, I WOULD LIKE TO EMPHASIZE ONE POINT: THIS IS NOT A "NEW JERSEY" ISSUE PER SE, BUT A NATIONAL ISSUE. IT AFFECTS RESIDENTS OF EVERY STATE IN THE NATION. LEFT UNADDRESSED, IT COULD AFFECT THE DRINKING WATER OF MILLIONS OF AMERICANS. WHILE SOME STATES MAY NOT KNOW AS MUCH ABOUT THEIR PROBLEM AS WE DO HERE IN NEW JERSEY, YOU KNOW AND I KNOW THAT THERE ARE HAZARDOUS WASTE SITES -- SOME KNOWN, SOME STILL UNDISCOVERED -- SPREAD THROUGHOUT THIS COUNTRY. THAT IS WHAT MAKES THIS PROBLEM ONE OF MOST IMPORTANT ENVIRONMENTAL ISSUES OF OUR TIME. AND THAT IS WHAT MAKES YOUR IMMEDIATE ACTION SO IMPERATIVE.

WHEN I TESTIFIED BEFORE YOU LAST MONTH IN WASHINGTON, I ADDRESSED A NUMBER OF SPECIFIC LEGISLATIVE CHANGES IN THE CURRENT SUPERFUND LAW WHICH WE BELIEVE CAN MAKE THE SUPERFUND PROGRAM MORE EFFECTIVE. I WILL NOT TAKE THE COMMITTEE'S TIME BY REPEATING THAT TESTIMONY TODAY, ALTHOUGH I HAVE SUBMITTED A WRITTEN STATEMENT FOR THE RECORD WHICH RE-EMPHASIZES A NUMBER OF THOSE POINTS.

I WOULD LIKE, HOWEVER, TO RE-STATE, IN THE STRONGEST TERMS, THE CENTRAL THEME OF THE TESTIMONY I DELIVERED THEN: THAT SUPERFUND SHOULD BE REAUTHORIZED, AND REAUTHORIZED NOW.

I HAVE STATED THAT I BELIEVE THAT THE SIZE OF THE FUND AVAILABLE TO ADDRESS THE PROBLEM OF HAZARDOUS WASTE SITES OUGHT TO BE INCREASED TO AT LEAST $1.8 BILLION PER YEAR FOR A PERIOD OF FIVE YEARS -- FOR A TOTAL OF $9 BILLION.

LET ME STRESS THAT IN MY VIEW, THIS AMOUNT IS A BARE MINIMUM. I WOULD NOTE THAT THE RECENT EPA SUPERFUND TASK FORCE REPORT, WHICH CAME OUT AFTER I AND THE OTHER GOVERNORS OF THIS NATION HAD DEVELOPED OUR $9 BILLION RECOMMENDATION, PUT THE TOTAL COST OF THE CLEANUP JOB AT BETWEEN $8.4 BILLION AND $16 BILLION.

THE ESSENTIAL POINT IS THAT SUPERFUND MUST BE RE-AUTHORIZED AS SOON AS POSSIBLE, AND THE SIZE OF THE FUND MUST BE INCREASED. THE HEALTH AND SAFETY OF OUR PEOPLE DEMAND NO LESS.

THE HOUSE OF REPRESENTATIVES IS PRESENTLY CONSIDERING A COMPREHENSIVE REAUTHORIZATOIN AMENDMENT -- H.R. 5640, SPONSORED BY NEW JERSEY CONGRESSMEN FLORIO, GUARINI, HOWARD, MINISH, ROE, ROUKEMA, AND SMITH, AMONG OTHERS. WHILE THIS LEGISLATION DOES NOT PROVIDE ALL OF THE AMENDMENTS WHICH I HAVE RECOMMENDED TO YOU, OR, IN SOME CASES, PRESENTS SOMEWHAT DIFFERENT SOLUTIONS TO THE PROBLEMS OF SUPERFUND IMPLEMENTATION THAT I HAVE PROPOSED, I NEVERTHLESS STRONGLY SUPPORT THIS EFFORT TO PROVIDE COMPREHENSIVE REAUTHORIZATION OF THE PROGRAM.

LIKEWISE, I PREVIOUSLY ENDORSED THE EARLIER VERSION OF SUPERFUND REAUTHORIZATION LEGISLATION SPONSORED BY SENATORS BRADLEY AND LAUTENBERG.

AS ALWAYS, NEW JERSEY STANDS READY TO ASSIST THE CONGRESS IN "FINE-TUNING" ANY LEGISLATIVE VEHICLE TO CREATE THE MOST EFFICIENT AND EFFECTIVE REAUTHORIZATION LEGISLATION POSSIBLE.

THE POINT IS THAT SOME VEHICLE MUST BE MOVED, AND HOPEFULLY PASSED AND SIGNED IN TO LAW, AS SOON AS POSSIBLE.

WITHOUT IMMEDIATE ACTION, THE PROGRAMS UNDERWAY IN NEW JERSEY AND A NUMBER OF OTHER STATES WILL BE SLOWED DOWN OR EVEN GROUND TO A HALT. THAT WOULD BE A TRAGEDY -- ONE THAT PUTS THE HEALTH OF OUR PEOPLE AND THE SAFETY OF OUR WATER AT RISK FOR NO APPARENT PURPOSE.

THE DELAY IN REAUTHORIZATION COULD ALSO SLOW UP EFFORTS THAT NEW JERSEY IS PREPARED TO MAKE ON ITS OWN TOWARD CLEAN UP. AND EVERY DAY THAT CLEAN-UP IS DELAYED IS ONE DAY TOO MANY.

2. The State Role

There are a number of critically important management issues associated with the Superfund program. Perhaps most serious is the need to allow New Jersey and other states to proceed with cleanup of sites included on the National Priority List, using state funds when federal funds are not available. This is especially important now, as we approach fiscal year 1985 without a reauthorization bill or an increased level of funding in place. The nature of the hazardous waste problem is far too critical to delay action when a state has the resources to remove such threats on its own. If Superfund is not authorized by October 1, 1985, some other mechanism must be put in place to allow state programs to continue. New Jersey Senators Lautenberg and Bradley have proposed one such mechanism which would provide states with credit for work done on Superfund sites with state funds. That credit could later be reclaimed for work on other sites when a reauthorization bill is in place. Under this approach, a state that proceeded would receive a credit for eligible costs that could be applied to other listed sites in the state. The grant of a credit would, of course, be subject to the authorization and appropriation of additional federal funds. In this way, states would no longer be forced to postpone cleanup efforts because of uncertainties surrounding the timing or amount of federal funding. An amendment to this effect is essential if states are to proceed expeditiously with their cleanup programs.

LET ME BE MORE SPECIFIC. IN FEDERAL FISCAL YEAR 1985, NEW JERSEY'S MANAGEMENT PLAN CALLS FOR ACTIVITY ON 69 SEPARATE MAJOR SITES. THIS WILL INVOLVE 144 SEPARATE DESIGN, ENGINEERING OR CONSTRUCTION PROJECTS AT A COST OF $108 MILLION IN FEDERAL DOLLARS. IN FISCAL YEAR 1986, WE WILL REQUIRE $123 MILLION TO KEEP THIS PROGRAM MOVING. TRANSLATING THESE NUMBERS INTO STATE FISCAL YEARS WE NEED $98 MILLION IN FISCAL YEAR 1985 AND $157 MILLION IN FISCAL YEAR 1986. PLEASE REFER TO THE GRAPH WE HAVE PROVIDED DEPICTING THE SHORTFALL WITHOUT REAUTHORIZATION AND WITHOUT A CREDIT AMENDMENT. IN FISCAL YEAR 1985, WE NEED TO USE $109.6 MILLION IN STATE RESOURCES. WITHOUT A COST CREDIT AMENDMENT, WE MAY LOSE ANY CHANCE OF RECOVERING THESE MONIES FROM THE FEDERAL GOVERNMENT. IN SHORT, WE'D BE PENALIZED FOR MOVING AHEAD ON THE HAZARDOUS WASTE ISSUE. NOTHING COULD BE MORE UNFAIR. FURTHERMORE, IN 1986, EVEN WITH THE CREDIT ISSUE ADDRESSED A REAUTHORIZATION WITH SUBSTANTIAL FUNDING INCREASES IS INDISPENSABLE, OR, IN NEW JERSEY ALONE, A SHORTFALL OF $138.7 MILLION WILL OCCUR. THIS ALONE SHOULD DEMONSTRATE MY RATIONALE FOR SUPPORT OF A MAJOR INCREASE IN THE SIZE OF THE FUND. IT IS, THEREFORE, ABSOLUTELY ESSENTIAL THAT A CREDIT MECHANISM BE PUT IN PLACE BEFORE OUR PROGRAM IS EITHER BROUGHT TO A STANDSTILL OR WE ARE FORCED TO COMMIT SEVERAL HUNDRED MILLION MORE IN STATE DOLLARS TO THE CLEANUP EFFORT.

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WHILE THE CURRENT EPA MANAGEMENT HAS BEEN VIGOROUSLY PROCEEDING TO IMPLEMENT SUPERFUND, AND HAS BEEN MORE THAN SUPPORTIVE OF NEW JERSEY'S EFFORTS, THESE FACTS CLEARLY INDICATE THAT THEY FACE A SIGNIFICANT PROBLEM. THIS YEAR, WHEN NEW JERSEY NEEDED AN EXTRA $20 MILLION TO CONTINUE ITS PROGRAM, EPA RESPONDED. NEXT YEAR, THEY WILL NOT BE ABLE TO. THEY SIMPLY DO NOT HAVE THE FISCAL RESOURCES AVAILABLE. THEIR OWN PROJECTIONS OF THE NUMBER OF STUDIES, DESIGN AND CONSTRUCTION PROJECTS THAT WILL BE INITIATED NEXT YEAR, WHEN COMPARED TO THE FISCAL REALITIES OF SUPERFUND, AMPLY DEMONSTRATE THIS POINT.

NEW JERSEY IS WILLING TO PUT UP ITS OWN MONEY TO KEEP OUR CLEANUP PROGRAM MOVING AHEAD. ALL WE ASK IS THAT A FAIR CREDIT FORMULA BE PUT IN PLACE SO THAT WE ARE NOT UNJUSTLY PENALIZED FOR OUR PROGRESS IN CLEANING UP HAZARDOUS WASTE. I AM FIRST AND FOREMOST HERE TO SUPPORT A SPEEDY REAUTHORIZATION BILL WITH A LARGE INCREASE IN AUTHORIZED FUNDING LEVELS. BUT THE HEALTH AND ENVIRONMENT OF MY STATE ARE TOO IMPORTANT FOR ME TO NOT EMPHASIZE THE NEED FOR AN INSURANCE POLICY - NAMELY THE LAUTENBERG-BRADLEY PROPOSAL.

ALTHOUGH I AM VIGOROUSLY SUPPORTING A SUBSTANTIALLY LARGER SUPERFUND REAUTHORIZATION IN A SPEEDY FASHION, I MUST ALSO CONSIDER THE POSSIBILITY THAT SUCH LEGISLATION WILL BE DELAYED. TO DEAL WITH THAT CONTINGENCY, COMMISSIONER HUGHEY WILL THIS WEEK REQUEST APPROVAL FROM OUR CAPITAL BUDGET PLANNING COMMISSION TO USE THE NEW JERSEY HAZARDOUS DISCHARGE BOND FUND.

3) NEW JERSEY PROGRAM

THERE ARE THOSE WHO WILL TELL YOU, OR MAY HAVE ALREADY TOLD YOU, THAT NEW JERSEY, OR OTHER STATES, WILL NOT BE ABLE TO FULLY OBLIGATE THE MONEY SET ASIDE FOR THIS YEAR. IN OUR CASE THAT'S APPROXIMATELY $40 MILLION. LET ME SAY IN RESPONSE, THAT I THINK WE WILL. THROUGH THE FIRST THREE-QUARTERS OF FISCAL YEAR 1984, WE HAVE MET EVERY TARGET OR EXCEEDED EVERY TARGET IN OUR MANAGEMENT PLAN. ALL OF THE STUDIES, ALL OF THE DESIGNS AND ALL OF THE REMEDIAL WORK THAT WAS TO HAVE BEGUN IN FISCAL YEAR 1984, THUS FAR, IS UNDERWAY. IF A DATE SLIPS IN COMPLETING AN ENGINEERING DESIGN OR A FEASIBILITY STUDY, OR IF THE DELAYS ARE ENCOUNTERED IN THE COMPLEX SITUATIONS WE FACE IN THE HAZARDOUS WASTE CLEANUP AREAS IN WHICH WE ARE WORKING, THEY WILL BE A MATTER OF DAYS OR WEEKS - NOT YEARS. THEREFORE, IT IS SIMPLY INEVITABLE THAT THE NEEDS WE HAVE IDENTIFIED, OR SOMETHING VERY CLOSE TO THEM, WILL BE REALIZED IN FISCAL YEAR 1985.

THE CHARTS AND GRAPHS THAT COMMISSIONER HUGHEY AND HIS STAFF HAVE AVAILABLE FOR YOUR INSPECTION AMPLY DEMONSTRATE WHAT I AM SAYING.

WITHOUT A REAUTHORIZATION OR A COST CREDIT AMENDMENT, WE ARE IN TROUBLE. MORE IMPORTANTLY, OUR ENVIRONMENT AND THE HEALTH OF OUR CITIZENS WILL BE UNNECESSARILY JEOPARDIZED. IN GOOD CONSCIENCE, WE CANNOT PERMIT THAT TO OCCUR.

FURTHERMORE, BASED ON NEW JERSEY'S EXPERIENCE, WE BELIEVE THAT THE SUPERFUND PROGRAM CAN BE MADE MORE EFFICIENT IF IT IS MADE LESS CENTRALIZED, WITH STATES AND FEDERAL REGIONAL OFFICES GIVEN LARGER DECISION-MAKING AUTHORITIES THAN THEY HAVE CURRENTLY. IN PARTICULAR, STATES SHOULD HAVE THE OPTION TO TAKE THE LEAD ROLE IN PLANNING AND IMPLEMENTING SUPERFUND RESPONSE ACTIONS, WITH A RIGHT OF FIRST REFUSAL TO ASSUME THE LEAD AT ANY GIVEN SITE. SUCH RESPONSIBILITY SHOULD INCLUDE ESTABLISHING PRIORITIES, UNDERTAKING REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES, SELECTING CONTRACTORS, ETC. IN ADDITION, ADMINISTRATIVE EFFICIENCIES CAN BE REALIZED IF STATES WERE AUTHORIZED TO DEVELOP A GENERIC STATEWIDE RESPONSE PROGRAM FOR SITES ON THE NATIONAL PRIORITIES LIST. NEW JERSEY HAS DONE THIS WITH GENERAL CONCURRENCE FROM EPA. THIS PROCESS SHOULD BE FORMALIZED AND INTEGRATED WITH THE SUPERFUND BUDGET SO THAT FUNDING IS CERTAIN AS A PROJECT MOVES FROM STUDY TO DESIGN TO CONSTRUCTION. THIS WOULD ELIMINATE MANY DELAYS IN THE CLEANUP PROGRAM. THIS TYPE OF GENERIC STATE-WIDE RESPONSE PROGRAM WOULD ALSO ACCOMPLISH NATIONALLY WHAT WE HAVE IN NEW JERSEY; NAMELY, A RATIONAL PRIORITIZATION SCHEME FOR HAZARDOUS WASTE CLEANUP. IN THE REALM OF HAZARDOUS AND TOXIC WASTE CLEANUP, EVERY SITE VIEWED IN ISOLATION DESERVES TO BE FIRST, EVERY PROJECT SEEMINGLY SHOULD START TODAY AND ANY DEGREE OF CAUTION CAN BE MISCONSTRUED AS AN UNNECESSARY DELAY...UNTIL, OF COURSE, THE SOLUTIONS DO NOT WORK OR THE CONTRACTOR IS JUDGED INADEQUATE. PUT ANOTHER WAY, WHEN EVERYONE IS FIRST, NOBODY IS FIRST AND EVERYBODY LOOSES.

THUS, WE SEE A GENERIC STATE PLAN APPROACH AS A KEY INGREDIENT IN THE NATIONAL SCHEME AND PERHAPS THE ONLY WAY A MASSIVE GEAR-UP IN THE PROGRAM CAN BE READILY ACCOMPLISHED. IN OTHER WORDS, IF YOU INDEED APPROVE ANY RECOMMENDATION FOR A $9 BILLION SUPERFUND PROGRAM, HIGH QUALITY STATE PLANS LIKE OURS IN NEW JERSEY ARE INDISPENSIBLE.

NEW JERSEY IS, IN FACT, THE ONLY STATE TO HAVE A COMPREHENSIVE CLEANUP STRATEGY. IT PROVIDES THE INGREDIENTS FOR A SUCCESSFUL LONG-TERM CLEANUP PROGRAM. MOREOVER, IT PROVIDES A CLEAR UNDERSTANDING OF WHERE WE ARE GOING AND WHEN AND WHAT THE COMPLICATIONS ARE THAT WE FACE. THE LIST IS OBJECTIVE AND IT FORCED US TO LAY OUT REALISTIC TIME FRAMES FOR CLEANUP ACTIONS OVER A FOUR TO SIX YEAR PERIOD. WE BELIEVE IT CAN PROVIDE A MODEL FOR USE BY THE REST OF THE NATION. IT IS NOT EASY TO DEFEND THE FACT THAT A PARTICULAR SITE MAY BE SCHEDULED FOR ACTION IN LATE 1986, BUT IT IS AN ACCEPTABLE PRICE TO PAY FOR DIRECTION AND PREDICTABILITY. REAL PROGRAMS DON'T SURVIVE LONG IN A WORLD OF COULD HAVES, SHOULD HAVES AND WOULD HAVES. BUT, NO MATTER HOW CONVENIENT A TARGET, WE DO HAVE A REAL PROGRAM AND IT IS A DOABLE, REAL WORLD UNDERTAKING.

4) <u>STATE RESPONSE FUNDS</u>

THE CURRENT SUPERFUND LEGISLATION CONTAINS TROUBLESOME LANGUAGE REGARDING THE PREEMPTION OF INDIVIDUAL STATE RESPONSE FUNDS. AS I SAID IN WASHINGTON, WE FEEL VERY

STRONGLY THAT FEDERAL PRE-EMPTION OF SUCH STATE TAXES IS TOTALLY INAPPROPRIATE. LANGUAGE IN SECTION 114C OF SUPERFUND HAS FOECED A GREAT DEAL OF LITIGATION AND CONTINUALLY THREATENS TO DELAY THE SUPERFUND PROGRAM. WE REQUEST THAT THIS SECTION OF THE LAW BE COMPLETELY REPEALED.

CONCLUSION

SENATORS, YOU ARE UNDOUBTEDLY AWARE OF THE ALARM THAT THE PRESENCE OF HAZARDOUS WASTE SITES HAS CAUSED IN NEW JERSEY AND OTHER STATES. I HOPE THAT ALARM WILL HELP SPUR THE CONGRESS AND THE PRESIDENT INTO ACTION IN REAUTHORIZING THE CLEANUP PROGRAM.

I AM GRATEFUL THAT YOU HAVE TAKEN THE TIME TO COME TO NEW JERSEY TO LEARN MORE ABOUT THE PROBLEM, AND ABOUT WHAT IS BEING DONE BY THIS STATE TO ADDRESS IT.

BUT I, THE CITIZENS OF THIS STATE, AND I BELIEVE THE CITIZENS OF THIS COUNTRY, WOULD BE EVEN MORE GRATEFUL IF CONGRESS ACTED TO REAUTHORIZED SUPERFUND IMMEDIATELY. I SINCERELY HOPE THAT YOU WILL.

THANK YOU.

TESTIMONY OF ASSEMBLYWOMAN MARLENE LYNCH FORD BEFORE THE SENATE ENERGY AND PUBLIC WORKS MEMBERS SENATOR STAFFORD AND SENATOR LAUTENBERG

HEARING ON SUPERFUND REAUTHORIZATION -- JUNE 4, 1984

GOOD AFTERNOON:

I AM ASSEMBLYWOMAN MARLENE LYNCH FORD, AND I REPRESENT A PORTION OF OCEAN COUNTY, WHICH, AS YOU MAY KNOW, IS AMONG THE FASTEST GROWING COUNTIES IN THE NATION BECAUSE IT IS A VERY ATTRACTIVE PLACE TO LIVE. BUT IT IS ALSO A COUNTY WHICH HAS A DOZEN SITES ON THE NATIONAL SUPERFUND PRIORITIES LIST, AND THOSE SITES POSE A SERIOUS THREAT TOT HE CONTINUED DEVELOPMENT AND ATTRACTIVENESS OF OUR AREA.

JUST HOW SERIOUS A THREAT THEY POSE WAS DRASTICALLY BROUGHT HOME TO ME RECENTLY. I WAS SPEAKING TO A REAL ESTATE AGENT, ONE WHO HAD OCCASION TO SHOW VARIOUS NEIGHBORHOODS TO THE FAMILIES OF PERSONNEL TRANSFERRED INTO THE AREA, WHO WERE LOOKING FOR A PLACE TO LIVE. THE AGENT TOLD ME THAT THE QUESTIONS SHE WAS BEING ASKED HAS SIGNIFICANTLY CHANGED IN RECENT YEARS. WHEREAS PROSPECTIVE PURCHASERS HAD ALWAYS ASKED FIRST ABOUT THE SCHOOLS AND ABOUT TRANSPORTATION AND ABOUT THE CONVENIENCE OF SHOPPING CENTERS, NOW THEY WERE ASKING ABOUT THE PROXIMITY OF DUMP SITES AND ABOUT THE PURITY OF THE WATER.

WE HAVE INDEED ENTERED INTO A NEW ERA.

THE DOZEN HAZARDOUS DISCHARGE SITES IN OCEAN COUNTY POSE A CLEAR AND PRESENT DANGER TOT HE HEALTH AND SAFETY OF THE PRESENT RESIDENTS. THEY POSE A THREAT AS WELL TO THE PROPERTY VALUES AND THE ECONOMY OF THE REGION.

AND THESE SITES ARE NOT BEING CLEANED UP! QUITE THE CONTRARY, THEY ARE GETTING WORSE DAILY. THEY ARE SPREADING, THEY ARE SEEPING MORE DEEPLY INTO THE GROUND, THEY ARE LEAKING INTO THE GROUNDWATER AND THEY ARE GETTING MORE DIFFICULT AND MORE COSTLY TO CLEAN UP.

THERE ARE PROBABLY MANY REASONS WHY THESE SITES ARE NOT BEING ADDRESSED PROMPTLY AND ADEQUATELY. ONE OF THESE REASONS IS BUREAUCRATIC OBSTRUCTION. I KNOW THAT PROGRAMS SUCH AS THE SUPERFUND PROGRAM HAVE DUAL - AND SOMETIMES MUTUALLY EXCLUSIVE - OBLIGATIONS TO BE <u>BOTH</u> ACCOUNTABLE AND EFFICIENT. AND I SYMPATHIZE. BUT THE STAKES ARE HIGH, AND THE CONSEQUENCES OF DELAY DEVASTATING.

IF INDEED THE DELAYS CANNOT BE REDUCED SIGNIFICANTLY, I WILL GO ON RECORD AS PROPOSING THAT NEW JERSEY REMOVE ITS SITES FROM THE NATIONAL PRIORITY LIST, ON WHICH THEY LINGER, AND THUS BECOME ELIGIBLE FOR PROMPT ATTENTION FROM OUR OWN STATE PROGRAM.

I MAKE THIS RECOMMENDATION RELUCTANTLY. LIKE MY COLLEAGUES, I WELCOME THE FEDERAL EFFORT TO JOIN WITH THE STATES TO SOLVE A PROBLEM THAT WAS OVERWHELMING IN ITS DIMENSIONS AND BEYOND THE FINANCIAL RESOURCES OF ANY SIMPLE STATE. BUT THAT FEDERAL EFFORT TO DATE HAS NOT ONLY NOT RESULTED IN ANY CLEANUPS, IT HAS PARALYZED OUR OWN STATE EFFORTS AS WELL.

THE DELAYS ARE INTOLERABLE.

THERE IS NO MORE SERIOUS PROBLEM THAT WE FACE, THAT THIS NATION FACES -- THAN UNATTENDED HAZARDOUS DISCHARGE SITES, FOR THEY CAN UNDERMINE THE HEALTH AND THE WEALTH OF THIS NATION. NEW JERSEY IS UNFORTUNATELY AT THE FOREFRONT OF THE PROBLEM. IF THE FEDERAL GOVERNMENT CANNOT HELP US ADDRESS IT, WE WILL HAVE TO DO THE BEST WE CAN ALONE.

NJ ACTION NEW JERSEY ALLIANCE FOR ACTION

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STATEMENT ON
SUPERFUND REAUTHORIZATION

BY
GEORGE KIRGIS
CHAIRMAN
NEW JERSEY ALLIANCE FOR ACTION COMMITTEE ON HAZARDOUS MATERIALS

BEFORE THE
U.S. SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

AT
STATE HOUSE
ASSEMBLY CHAMBERS
TRENTON, NEW JERSEY
JUNE 4, 1984

My name is George Kirgis, and I am the Chairman of the Committee for Hazardous Material of the New Jersey Alliance for Action. I am a licensed Professional Engineer and a licensed Professional Planner.

The Alliance is a unique state-wide coalition of about 350 business, labor, government and professional organizations working together to promote economic development and the creation of jobs for New Jersey. The Alliance serves as a catalyst in solving problems that business, government and labor have difficulty in solving alone.

The over 50 members of my committee represent interests from large pharmaceutical and chemical companies, to very small firms, transporters, large and small, disposers, treatment facilities, labor, clean-up contractors, engineers and substantial presentation by state government.

The Alliance strongly supports the reauthorization of the comprehensive Environmental Response and Compensation Act (Superfund). Reauthorization of the Superfund is essential to New Jersey's Hazardous Dump Site Clean-Up Program, since the costs involved will greatly exceed present funding levels. A $3.2 billion level will probably be insufficient to provide for clean-up of even the majority of the 546 sites presently listed on the National Priority List.

While Superfund legislation progresses in Congress, some of the most critical problems presently impeding the New Jersey Hazardous Waste Program could be reduced through amendments to the Resource Conservation and Recovery Act (RCRA). There are four (4) amendments of special importance to our state:

1. Transferable State Cost Credits

New Jersey and other states should be allowed to proceed with clean-up of Superfund sites under a cooperative agreement with the EPA, using state funds when federal funds are unavailable. These funds should be transferable from one site to another. This way states will not be forced to slow down their program because of uncertainty regarding timing of federal funds or the potential of credits, once established, being site specific. These cost credits are very important since many New Jersey and probably national sites are continuing or even increasing their negative impact on the environment.

2. Pre-emption

The issue of federal pre-emption of state funding sources by the enactment of Superfund must be clarified.

As one could expect the diversity of our committee members makes an unanimous stand difficult. However, everyone agrees, the present uncertainty is undesirable.

3. Federal Participation in Operations and Maintenance

The responsibility for operation and maintenance costs following Superfund remedial action also must be clarified. In some cases

operation and maintenance costs may be higher than the initial remedial clean-up costs. At the present time, EPA holds that the states pay 100% of operation and maintenance costs. States can not and should not be required to bear such costs alone. These expenditures should be considered part of the overall project costs and should be shared in accordance with the 90% federal and 10% state formula for remedial action. Such equal treatment will also facilitate design which results in minimum overall costs for a specific site.

4. Cost Shares on State Owned Sites

Section 104 (c) of Superfund provides that the State will share at least 50% of the cost for actions taken at a site owned by the State, or its political subdivision. However, in two years EPA has been unable to establish criteria to determine the appropriate state share at such sites. While we believe that, in certain cases, something less than 50% payments by the state would be more equitable, we would urge that at the very least, Section 104 be amended to make 50% a maximum state share.

I thank this committee for the opportunity to be heard and for their willingness to travel to our state.

LEAGUE OF WOMEN VOTERS OF NEW JERSEY
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TESTIMONY OF
ANN L. AUERBACH
CO-DIRECTOR OF NATURAL RESOURCES
OF THE
LEAGUE OF WOMEN VOTERS OF NEW JERSEY
BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
ASSEMBLY CHAMBERS
TRENTON, NEW JERSEY
JUNE 4, 1984

Good afternoon. My name is Ann Auerbach, and I serve as one of three Energy and Natural Resource Directors for the League of Women Voters of New Jersey. We welcome you to our capitol and thank you for the opportunity to present testimony today. Our members have a longstanding history of active involvement in environmental work at local, state, and national levels. The League supported passage of the 1980 Comprehensive Environmental Response Compensation and Liability Act (CERCLA or Superfund) and we have pressed for full implementation of this law. Our current focus is on citizen education in hazardous waste siting procedures, the development of source reduction policies, and the involvement of citizens and communities in the clean up of Superfund sites.

As the time for the reauthorization of Superfund approaches, the scope of the law must now be expanded in view of our improved understanding of the many environmental and public health risks associated with these hazardous waste sites.

The first item which the League believes must be addressed,

and certainly the most important for the long term, is a significant increase in the money to be put into the fund. Superfund 1980, with a tax that netted $1.6 billion, was but an introduction to citizens, government officials, and industry of the gravity and extent of the problem of prior mismanagement of hazardous waste in our country. Clearly, at this time, there is consensus among all, that adequate clean ups can be accomplished only with significantly large, additional funding.

A second interest of the League is the satisfactory use of cross credits by the states. We believe this is necessary so that clean ups can commence in a timely fashion and proceed unimpaired even in the face of federal funding uncertainties and delays. The League of Women Voters of New Jersey supported passage of our state's 1981 Hazardous Discharge Bond Act. This raises $100 million to be used for the identification and clean up of hazardous waste sites in our state. Use of monies such as these is both reasonable and sensible. Timely, efficient clean up of hazardous waste sites is long overdue, and the risks to the citizens and the environment are burdensome and eminent.

Thirdly, the League recommends the use of clean up standards, from existing environmental legislation, such as the Safe

Drinking Water Act, the Resource Conservation and Recovery Act, the Clean Water Act, and the Clean Air Act. The setting of new standards by the Environmental Protection Agency would be a much too lengthy process for a situation that demands immediate attention.

Lastly, the public participation program which is outlined in the federal law, hinges heavily on the outreach efforts of the state administrator. In New Jersey, with so many sites on the list, our public participation program personnel and staff technical experts host numerous meetings with citizen groups throughout the state. They have to date produced an ambitious and responsive interplay between local community groups and government agencies. League members in New Jersey have entered into this public participation process through a national League program called Adopt-A-Dump. The monitoring of the remediation and clean up activities is the primary goal and small grants are available to League members for hotlines, newsletters, technical reviews, and other types of citizens' Superfund site activities.

In conclusion, League members across the country urge your prompt reporting of an enlarged and expanded Superfund bill that can adequately handle hazardous waste site clean ups in a prompt and efficient manner. Here in New Jersey we have a forward thinking and aggressive administration that is committed to making our state safe for its citizens. We are an involved and responsible environmental community. We are eager for federal assistance and willing to do what is necessary to fulfill our obligation in this joint federal-state endeavor.

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